



TOM SWIFT AND HIS SUBOCEAN GEOTRON

No. 27 in the Tom Swift Jr. series

VICTOR APPLETON II

The Tom Swift Jr. series:

- 1 Tom Swift and his Flying Lab (1954)
- 2 Tom Swift and his Jetmarine (1954)
- 3 Tom Swift and his Rocket Ship (1954)
- 4 Tom Swift and his Giant Robot (1954)
- 5 Tom Swift and his Atomic Earth Blaster (1954)
- 6 Tom Swift and his Outpost in Space (1955)
- 7 Tom Swift and his Diving Seacopter (1956)
- 8 Tom Swift in the Caves of Nuclear Fire (1956)
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From the front:

The young scientist-inventor embarks on one of the most challenging missions of his adventure-packed career. The mission: recover a valuable cache left on earth thousands of years ago by colonists from another planet. Can Tom locate it before his deadly foe the Kranjovians seize the capsule?

Clues to the cache lead him to a location beneath the ocean floor-near strange Easter Island, with its eerie ruins. Further search is impossible until Tom can invent and build a manned, burrowing mole-mobile-the Geo-tron.

Tom and his close pal Bud Barclay race against time in an equally challenging project: to build a unique aquarium and stock it with rare species of deep-sea life. If they

fail to meet the deadline, a donor's bequest goes to the despotic Kranjovian government.

Their desperate contest with the Kranjovians propel Tom and Bud into a series of hair-raising perils. Tom's weird ordeal as a "bird man" of Rano Kao; the boys' narrow escape from being buried alive in a cave; their life-or-death undersea duel for the priceless cache-all go to make up this electrifying, suspense-filled adventure.

ILLUSTRATED BY EDWARD MORITZ

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CHAPTER I

SUBMARINE TRAIL

"The phone! And it's past midnight!" gasped Bud Barclay, knuckling sleep from his eyes to peer at his glowing wristwatch dial. "Tom, that message from space may be coming through!"

Tom Swift was already leaping from his bunk as another shrill ring pierced the darkness of the apartment adjoining his private laboratory.

His pulse pounding, the young inventor turned on a light and snatched up the telephone. Friendly beings from outer space had alerted the Swifts to stand by for an urgent message. Was this the signal from space communications?

"Tom Swift Jr. here!"

"Get set for bad news, skipper!" The caller was Harlan Ames, security chief of Swift Enterprises. "One of our submarines is missing!"

The grim report filled Tom with apprehension and drove all thought of the space message from his mind. "Which sub?" he asked.

"The *Angler*."

It was the newest model of jetmarine in the Swifts' fleet of undersea research craft!

Tom, who had invented the small, two-man jetmarine, had added numerous advanced features in designing the *Angler*. Its hull was the lightest yet strongest ever built to withstand the crushing pressure of the ocean depths. Now Tom wondered anxiously if he had made some fatal mistake in its design.

"Give me the whole scoop, Harlan."

"The *Angler* took off from Fearing Island this afternoon," Ames replied. "She was due to radio back a routine report to the base at eight p.m. No message was received, and she failed to respond when Fearing tried to contact her. The *Angler* is now more than four hours overdue."

Tom's mind groped for some ray of hope. "It's possible that her radio conked out," he conjectured. "But I agree, it looks bad."

"Fearing notified me first in case of sabotage," Ames went on. "I told them I'd pass the word to you right away, skipper."

"Glad you did, Harlan. Incidentally, have you any reason to suspect a breach of security behind *Angler's* disappearance?"

"No reason so far," the security chief replied. "But I'm going to hop over to Fearing Island at once and start checking out every angle."

"You're calling from home?" Tom asked.

"Right. Be leaving as soon as I hang up."

"Okay. I'll meet you at the airfield!"

Tom repeated the alarming news to Bud.

"What about that communication you're expecting from your space friends?" asked Bud, a dark-haired, burly young flier and astronaut from California.

Tom, a blond, rangy youth with a crew cut, gave a worried shrug. "I hate to miss it, but there may be lives at stake on the *Angler*. I'll have to call Dad and ask him to be on hand for the space message."

For some time the Swifts had been in radio contact with an unknown form of intelligent life elsewhere in the solar system. That morning Tom had picked up a signal from the space beings, alerting him about an urgent message to follow. The two eighteen-year-olds had bunked overnight at Enterprises in order to be available when the communication was received.

As soon as Tom was dressed he telephoned his home. Mr. Swift answered.

"Has the message come through, son?" he asked eagerly.

"Not yet, Dad. My reason for calling is that the *Angler* is missing!" Tom told of the submarine's mysterious failure to report, and added, "Bud and I are flying over to Fearing Island at once to start a search in the *Sea Hound*."

"Good idea! If *Angler* is four hours overdue we'd better not wait any longer," Mr. Swift said in an anxious voice. "Meantime, I'll drive to the plant and stand by for word from our space friends."

"Thanks, Dad. There's a night operator on duty in the space communications lab if

anything should pop before you get here."

Tom and Bud hurried outside. They climbed into a jeep, then sped across the grounds of the high-walled, four-square-mile experimental station. Floodlights cast a ghostly radiance over its sprawling glass-tiered laboratories and workshops. Overhead loomed slender steel radio masts, topped by red warning beacons.

Tom braked to a halt near a hangar on the Enterprises airfield. Ames soon arrived, and the trio took off in a Whirling Duck-a helijet aircraft, another of Tom's inventions.

"What's your plan?" the security chief asked as they jetted eastward to the Atlantic coast.

"Bud and I will try to pick up *Angler's* trail with the aquatomic tracker," Tom replied. He had developed this device to help solve the mystery of a treasure-laden liner which had been sunk and looted in mid-ocean. The tracker could detect and identify chemical traces given off by ships or other objects in the water.

Soon the Whirling Duck neared the coast. Tom cut speed and began a gradual descent. As Fearing

Island came into view, a few miles offshore, he extended the Duck's rotors.

Flash! A burst of blinding white light suddenly lit up the night sky. Tom and his two companions in the helijet raised both hands to shield their eyes from the dazzling glare.

"Jumpin' jets! What happened?" Bud gasped.

"I think I heard a report from the ground," said Ames. "It must have been fired from a mortar on the coast!"

Blinking and squinting in the sunlike brilliance, Tom sent the Whirling Duck jetting upward, then maneuvered into position above the source of light. As the flare burned itself out, Bud reached from the helijet with a boat hook and fished in a small green parachute.

Tom swooped down along the shoreline, hoping to find the mortar or the person that had fired the flare. But the gunner had evidently fled or taken cover. By this time, Fearing tower was frantically radioing questions to the Duck.

"No damage," Tom reported. "We have the parachute from the flare for examination, but otherwise no clue."

Fearing Island, a long strip of sand and scrub-grass in the Atlantic, had been converted into the Swifts' rocket and undersea base. It was tightly guarded by drone planes, radar, and sonar buoys. Tom asked for landing instructions and came down on the island airfield.

Harlan Ames issued rapid-fire orders to a base security officer who came rushing out to meet them. Then Tom and Bud roared off in a jeep toward the seacopter hangar.

The *Sea Hound*, newest and sleekest version of Tom's diving seacopter, stood on the field ready for take-off. This revolutionary flying submarine had an enclosed, atomic-powered rotor which provided power for flight and thrust when submerged. A three-man crew had already gone aboard in response to radioed instructions from Enterprises.

In moments Tom had taken his place at the controls, with Bud in the bucket seat beside him. The *Sea Hound* soared aloft from the airfield, then arced downward onto the choppy waters beyond the jetmarine docks.

"Do you know the *Angler's* intended course?" Bud asked.

"Not exactly," Tom replied. "She was still on shakedown. Mel Flagler was in command. His orders were to cruise south along the continental shelf and take oceanographic readings."

As he spoke, Tom reversed the rotor pitch and eased forward on the control wheel. The *Sea Hound* plunged into the dark waters.

Once the seacopter was submerged, Tom switched on its aquatomic tracker. Soon lights began to flash on the readout panel, indicating traces of Swiftonium-a radioactive isotope used in the jetmarine's reactor. Other chemical particles also registered, which could only have come from the newly built *Angler*.

"Okay-we're on scent," Tom said. He tuned the TC, or trail constructor, to follow the sub's traces, then switched to automatic pilot.

As their sleek craft settled on course and picked up speed, both boys sat back to watch the darting fishes and other sea life revealed in the glare of their search beam. The *Sea Hound* cruised outward along the deepening slope of the ocean floor. Veering south, it followed the drop-off of the continental shelf.

About two hours later, the *Sea Hound* sharply altered course to follow the *Angler*. Surprisingly, the route lay in a northwesterly direction, back toward the coast.

"How come?" Bud asked, flashing a puzzled glance at the pilot.

Tom frowned and shrugged. "I don't know."

"Maybe she developed trouble and started back to the base."

Tom shook his head as he plotted their new course on a piloting chart. "This won't bring us back to Fearing-it'll take us to a point fifty or sixty miles south along the coast."

Tom slowed the *Sea Hound* cautiously as they neared land. The readout lights were now indicating much stronger, fresher Swiftonium traces.

"She must have heaved to here for a while," Tom commented. "We can't be very far behind now. I'd say not more than an hour."

Again the *Sea Hound* changed course, this time heading straight out to sea. Tom increased speed. Presently the sonarman sang out that a blip was showing on his scope.

"Must be *Angler*," Tom said tersely.

Minutes went by. Then Bud gave an eager shout. "There she is!"

The *Angler* lay dead ahead, gliding through the water at about five knots. Torn hailed it over the sonarphone but received no response. The *Sea Hound's* crewmen clustered around the pilot's window to peer at the eerily silent craft.

"What gives with those guys, skipper?" muttered one of the men uneasily. "Why don't they answer?"

"I wish I knew." Tom's voice was grim.

As they overhauled the *Angler* and drew quickly abeam, their eyes widened in dismay. Two figures could be seen in her transparent forward compartment. Both lay motionless on the deck!

"One is Mel!" Bud exclaimed. "But what in hydrospace happened to him and his crew?"

Tom was asking himself the same question. Had the jetmariners collapsed from some accidental cause-perhaps failure of the *Angler's* air supply or a radiation accident? Or had their ship been overpowered by some unseen enemy?

Tom slowed the *Sea Hound*. "Looks as though I'll have to go aboard to find out."

"Hold it!" Bud put a hand on his pal's arm. "Whatever-or *whoever*-got Mel and his

crew could still be in there!"

"That's a chance I'll have to take," Tom said, rising from the pilot's seat.

"Okay, so we'll both go."

Tom turned over the controls to a crewman, then he and Bud donned electronic hydrolung suits and lowered themselves out of the *Sea Hound's* air lock. Nerves taut, they streaked through the water toward the jetmarine. Both boys were gripped by the same unspoken dread- what unknown danger awaited them aboard the *Anglerf*

CHAPTER II

STRANGE SKY WATCHER

THE *Sea Hound's* crew watched in breathless suspense as the two black-suited hydronauts reached the jetmarine. Bud clung to its streamlined sail, or superstructure, while Tom levered the hatch-opening mechanism.

One at a time the boys descended into the *Angler's* air lock, then down a steel ladder into her main cabin. Four crewmen lay sprawled about the deck!

Bud ripped off his mask. "Good grief! A clean sweep!"

"Let's hope they're alive!" Tom muttered.

The boys examined the victims, checking each man's pulse. All seemed in good condition, although unconscious.

"Whew! That's a relief!" Bud said.

"If only we knew what made them black out!" 11

Tom straightened up and strode to an instrument panel on the bulkhead. "According to these radiation and air purity monitors, the environment in here seems to be normal," he said thoughtfully. "Bud, I just can't figure this!"

"That makes two of us, pal."

Tom reported the situation by sonarphone to his crewmen on the *Sea Hound*. Then the boys carried the jetmariners, one by one, into the *Angler's* bunkroom. Some of the men stirred groggily and flickered their eyelids, but lapsed back into unconsciousness.

"Looks as if they'll revive soon," Bud said hopefully.

Tom and Bud returned to the steering compartment. Tom brought the *Angler* up to periscope depth and radioed the base. Then he set course for Fearing Island, escorted by the *Sea Hound*.

Presently he and Bud heard Mel Flagler's voice call out from the bunkroom. A moment later the sturdy, sandy-haired skipper of the *Angler* made his way forward on somewhat shaky legs. His pale face gaped in astonishment when he saw the two boys at the controls.

"Hi, Mel!" Tom greeted him. "Are you sure you feel well enough to be up?"

"Sure, I'm okay. But I'll feel a lot better when I find out what happened."

Bud responded with a grin, "We were counting on *you* to fill in a few details."

Tom hastily explained how he had tracked the *Angler* and found its crew unconscious.

"I'll tell you as much as I remember," Mel began. "A little before seven p.m. we were proceeding on a southerly course when our sonarman picked up an SOS on his headphones. Sounded like someone rapping on metal. It turned out to be a frogman."

"A frogman!" Bud echoed in surprise.

Mel nodded. "He'd been rapping on his air tanks. We were cruising about two hundred feet down when we spotted him swimming straight toward us. I assumed he'd got separated from his ship or boat and was near the end of his air supply. So we took him aboard."

"Then what?" Tom asked intently.

"Well, I was at the controls, but I got up to look aft as the men helped him aboard. The minute he came through the air lock, he pulled a gadget that looked like some sort of handgun. He pointed it at the crew and before they could grab it away from him-*bing, bing, bing, bing!* They went down like tenpins!"

"What about you and your copilot?" asked Bud.

"We made a dash for something to defend ourselves with, but he ran forward and pointed the thing at us, too. That's all I remember."

"His weapon must have been an anesthetic pistol," Tom conjectured.

"But what was he after?" Bud asked, perplexed.

"*Angler* is probably the most advanced sub afloat, next to *Sea Hound*," Tom said. "She's full of technical secrets that any foreign spy would give his right arm to glean."

"Then why not steal her outright?" Mel queried.

Tom frowned. "The frogman and his bosses must have considered that too big a risk. It would amount to an open act of war-and we might have trailed the *Angler* back to one of their country's ports. This way, he could get most of the important technical data and then disappear without leaving any clues."

"But how much could he find out in one night's work?" Bud objected.

"Wait a minute!" Mel broke in excitedly. "You two are assuming the frogman left the ship. How do you know he's not still aboard?"

Tom's eyes narrowed. "Good point, Mel. We don't know-but we'd better find out pronto!"

While Tom stayed forward to maneuver the ship, Bud and Mel made a hasty search. They soon returned to report a complete blank. Meanwhile, Tom had had a new and dismaying hunch.

"What about the ship's engineering blueprints, Mel?" he asked.

"Good night! I never thought of that!" Mel Flagler dashed aft to the engine room. When he came back, his face was glum. "They're gone."

By this time, some members of the crew were regaining consciousness. They were as startled and puzzled as their skipper.

It was daylight when they reached Fearing Island. As soon as the *Angler* docked, the officers and crew were rushed to the base hospital. Meanwhile, Tom hurried with Bud to the island headquarters building to talk with Harlan Ames.

"Any clues yet on who fired that parachute flare?" Tom asked.

The security chief shook his head. "Not yet, but I have men combing every inch of the shore over on the mainland." Ames paused quizzically. "Do you think there's some connection between that and what happened to the *Angler*?"

"I'd be willing to bet on it," Tom said. "The *Angler's* trail indicated that after her crew blacked out, she was taken toward the coast- probably to a rendezvous with a team of technical experts. They no doubt came aboard and went over her with a fine-toothed comb. Meantime, a lookout was standing by near Fernwood."

Fernwood, a coastal town, was located directly across the water from Fearing Island.

"Then the guy who fired the flare was the lookout?" Bud asked.

Tom nodded. "Right. They'd know it was only a matter of hours before Dad or I would be alerted that *Angler* was missing-and they'd know about the aquatomic tracker, too, from news headlines."

Ames broke in. "So any aircraft flying from Enterprises to Fearing at that hour of the night would be a tip-off that a search was about to get under way."

"Sure, and the flare would've enabled any watcher with binoculars to spot me aboard. The lookout must have radioed a warning to the jet-marine. The hijackers turned her loose on a course heading out to sea and abandoned ship." "It adds up, all right," Ames agreed. "But what about the frogman?" Bud said. "How did he manage to intercept the *Angler*?"

"That wouldn't be hard," Tom said. "This cruise wasn't secret. Her crew may have talked about it in public. Then an ordinary pleasure boat could have been lying in wait to shadow the jetmarine once she put to sea. The only equipment an enemy would need to take would be dunking sonar, unreeled by cable." Bud scowled. "Pretty neat." The boys ate breakfast in the base mess hall, then flew back to the experimental station. From the airfield they drove to Swift Enterprises' Main Building, where Tom Jr. and his father shared a spacious double office, filled with colorful models of their inventions. Huge picture windows gave a broad view of the plant.

Mr. Swift-trim and athletic, with close-cropped hair graying at the temples-was seated behind one of the twin modern desks. He listened with keen interest to Tom's report on the *Angler*.

"If foreign spies have inspected all her new deep-sea features, it is a bad blow," the elder scientist commented.

"Plenty bad," Tom agreed, "although I'm sure they couldn't duplicate all her structural materials. And the blueprints alone wouldn't give them every secret of her equipment."

Mr. Swift nodded thoughtfully. "At any rate, the news could have been worse. Thank

goodness the *Angler's* crew is safe."

"How about that message from space, Dad?" Tom asked. "Did anything come through?"

"No, not the slightest signal. I waited until about six a.m. at the space communications lab and finally came to the office."

Both Tom and Bud were too excited by the night's events to think of sleep. They jeeped to Tom's private laboratory, where the young inventor had been experimenting with a new type of glass.

"What's this stuff supposed to do?" Bud asked as Tom placed a thick pane of the glass in a powerful bending brake.

"Resist breakage of any and every kind-I hope," Tom replied. "I have an idea the day may come when *some* undersea research craft will be built entirely of glass."

He pressed a switch and the machine slowly began to bend the pane into a right angle. But when Tom turned the machine off, the glass returned to its original flat shape without fracture.

"Wow!" Bud exclaimed, wide-eyed. "If I didn't know I was in your lab, genius boy, I'd think I was seeing things!"

A buzzer sounded on the powerful radio transceiver, which was banked amid a mass of electronic equipment. Tom hastily turned on the set and answered. The voice of George Billing, the Swifts' communications chief, came over the speaker.

"Urgent call for you, skipper, from Ken Horton at the space outpost!"

"Right. Put him on," Tom replied.

Horton was the commander of the Swifts' space station, orbiting 22,300 miles above the earth.

"Tom, we've just sighted a strange spacecraft!" Horton reported excitedly.

"Any clue to its nationality, Ken?"

"No, but I think it maybe extraterrestrial!"

A possible visitor from outer space! Tom and Bud exchanged startled glances.

"What gives you that idea, Ken?" Tom asked.

"For one thing, its conformation-it looks like a flying saucer. Second, when we sighted the craft, it was heading toward earth at a fantastic speed from somewhere far outside our own orbit. We've been calling the pilot on radio but there's no response."

Tom snatched a pencil. "Give me its course, speed, range, and current bearings."

Ken began to read out figures from an astronomical computer. "Hold it!" he said suddenly. "It appears to be settling into a stationary orbit at a point somewhere above the Pacific."

Tom jotted down the data, then dashed outside with Bud and jeeped back to the Main Building. Here they took an elevator to the glass-domed observatory. Tom hastily tuned and trained his megascope space prober, an electronic telescope of potentially infinite range.

Soon an image of the unknown spacecraft came into focus on the viewing screen. Saucer-shaped, it was made of bluish, shimmering metal, with no apparent portholes or other openings.

"I'll bet it belongs to your space friends!" Bud exclaimed.

Tom did not answer. A chill, uneasy feeling swept over him as he watched the seemingly motionless object floating in the sky.

"I'm not so sure about that, Bud," he said slowly. "For all we know, it may be unfriendly. It could be watching something down here on earth-maybe making observations for a hostile purpose!"

CHAPTER III

ENEMY SAUCER MAN

BY telephone Tom notified his father of the weird, unidentified voyager. Mr. Swift quickly joined the boys in the observatory. His brow puckered as he studied the spacecraft on the megascope screen.

"The skin of that ship looks very much like the metal used in the space ark, although the color is a deeper blue," Mr. Swift remarked.

The ark was the remote-controlled craft which the friendly space beings had used on several occasions.

"This has the same satiny luster," Tom agreed.

"Why wait around?" Bud urged excitedly. "Let's hop up there in the *Challenger* and buzz it! We might even be able to go aboard!"

Tom would have liked nothing better, but his sense of caution held him back. "I think we'd better sit tight till we hear from our space friends. Don't you, Dad?"

Mr. Swift nodded. "Yes, I agree, son. This flying saucer may have something to do with the delay in their sending the message."

After Bud had observed the mysterious spaceship a while longer, he said that it was time to report to the airfield for his regular test-piloting duties at Enterprises. "How about lunch, Tom?" he asked before leaving.

"Sure thing, fly-boy. See you in the lab at noon."

The Swifts stayed on in the observatory studying the saucer. It remained throughout the morning in its fixed orbit above the Pacific.

Shortly before twelve o'clock Tom received a call from Dr. Leo Palfrey, a government scientist in Washington, D. C. Dr. Palfrey explained that he had learned of the appearance of the unknown spaceship through the United States' satellite-monitoring system and also by radio notification from the Swifts' space outpost.

"Washington is rather concerned about that saucer, Tom," he went on. "At present there's no way of telling whether it's friendly or hostile. We'd like to know more about it. I wonder if you'd allow a small, hand-picked team of astronomers and scientists to study it over your megascope space prober."

Tom consulted quickly with his father, then said, "Yes, we'd be glad to have them, Dr. Palfrey. As long as they have security clearance, the prober will be at their disposal."

Palfrey thanked Tom, and added, "This is regarded as a top-priority matter, so I'll arrange to have the men flown to Shopton as soon as possible-before the end of the day, in fact."

At lunchtime Tom strolled across the grounds to his private laboratory. News of the mysterious saucer had spread and employees were standing in groups, discussing it excitedly.

A plant engineer called out to Tom, "What's the latest on that blue spaceship, skipper?"

"Still up there, Jake. And I'd say it's definitely not earth-made. Otherwise, you know as much about it as I do."

Tom continued on to his laboratory. While waiting for Bud to arrive, he began a torsion test of his new-formula glass.

Suddenly the laboratory door swung open and a space-suited figure burst into the room. Tom stared at the incredible-looking head inside the transparent bubble helmet.

The spaceman had a blue face and a huge, chicken-like yellow beak!

"Good grief! What is this-a joke?" Tom stared in amazement at the weird creature.

The spaceman locked the door and broke into howls of laughter. Wrenching off his space helmet, he collapsed onto a lab stool.

Tom was seized by a sudden suspicion. He grabbed a damp rag off the workbench and wiped it forcibly over the spaceman's face. Smears of blue paint and gobs of yellow make-up putty came off on the cloth!

"Bud! For the love of Mike!" Tom exclaimed. "What're you up to now?"

"Pulling a fast one on Chow!" Bud confessed, referring to the Swifts' private chef at Enterprises. "I pretended to be an enemy saucer man, just landed-almost scared Chow out of his wits! . . . Oh, oh! Here he comes now, hot on my trail!"

Pounding steps could be heard approaching along the corridor, and a foghorn voice bellowed threats of mayhem to all invaders. It was Chow Winkler, the roly-poly Texas former chuck-wagon cook. An instant later his gnarled fist rattled the doorknob, then hammered a loud tattoo.

"I seen you go in there, you chicken-beaked varmint!" the cook thundered. "Open up an* surrender, or I'll bust the door in an' drag you out!"

Again he pounded on the door.

"So you won't come out, eh? Aw right, you cosmic sidewinder, you're askin' fer it! Brand my skillet, I'll *smash* my way in!"

Tom grinned. "This has gone far enough!"

He strode across the laboratory and unlocked the door. Meanwhile, Chow had backed off for a running start and was now charging forward to use his shoulder as a

battering ram. As Tom yanked the door open, Chow came hurtling in. He was clutching an enormous old branding iron and wore a gas mask.

Meeting no resistance, he whooped past the boys, tripped over a bench, and went plunging headfirst into a tank of water which Tom had been using for some ultrasonic experiments!

Bud collapsed into fresh hysterics, but Tom cried out, "Chow, take it easy!"

The pudgy cook floundered out of the tank. He pulled off the gas mask he had donned to protect himself against the saucer man's fiendish emanations, and stood blinking foolishly at the two boys.

"Er-look, Chow, old pal," Bud said hastily, "it was only lil ole me dressed up in a space suit. Just a joke, that's all. Strictly in fun."

"B-b-brand my radarscope!" Chow spluttered. "You mean that chicken-faced critter was jest you?"

Bud nodded apprehensively.

"An" there ain't no invasion by enemy saucer men?"

Bud shook his head, tensing himself for the explosion to follow.

To the boys' relief, the bald-domed chef burst into raucous guffaws. "Reckon you jokered me fair an' square, buckaroo-I bit hook, line, an' sinker!"

Bud gave him a repentant hug, and Tom patted the cook on the shoulder, remarking, "You're a real sport, old-timer. Now how about changing into some dry duds and bringing some lunch?"

"Comin" right up, boss!"

"What a man!" Bud said as they watched Chow clump off down the corridor in his high-heeled cowboy boots. "Next thing you know, he'll have me feeling ashamed of myself!"

"It's about time," Tom retorted with a grin.

Later, as the two boys were munching on sizzling hot beefburgers, a plant messenger delivered a can of motion-picture film to Tom. Accompanying the film was a letter from a New York City law firm, Springthorpe and Quilby. It said:

Dear Mr. Swift:

We would appreciate it very much if you would view this film as soon as possible.

A member of our firm will contact you promptly to discuss the matter further.

Sincerely yours, Cyrus A. Springthorpe

Tom read the letter again, then passed it to Bud.

"What's this all about, Tom?"

"Search me. I'll see if Miss Trent knows anything about it," Tom telephoned the Swifts' secretary.

"The film just arrived a few minutes ago," Miss Trent said in answer to his query. "The gate guard said the deliveryman apologized for not getting it here sooner. It should have arrived first thing this morning, but there was some sort of mix-up. I'm afraid that's all I can tell you."

"Okay, thanks." Tom hung up and turned toward Bud. "I guess if we want to know any more we'll have to take a look at it."

As soon as they had finished eating, the two boys returned to the Swifts' office. Tom's father, Miss Trent informed them, had gone to the Bionics Department.

Tom threaded the film into a projector, then flicked a switch to close the window drapes. He touched a button and a beaded screen descended over one wall.

"Lights! Action! Camera!" Bud quipped eagerly as Tom started the projector.

A moment later both boys gasped

CHAPTER IV

TIME CAPSULE

THE picture thrown on the screen was an underwater shot of a fish with long, needlelike teeth protruding from its jaws. Another weird, dark specimen glided past the camera-its stomach looked like a football. This was followed by a dogfish shark, with huge, milky, sightless eyes resembling headlamps.

"Those are specimens from the ocean floor!" Bud exclaimed.

Tom nodded and murmured, "Strange creatures of the deep! ... I wonder why the film was sent here."

The film showed various forms of marine life. Some of them glowed with a strange, brilliant luminescence. Several times, vertical streaks of light darted through the water. One streak halted abruptly, revealing itself as a long, slender fish resembling a silver spear. It poised before the camera a moment, then turned and darted downward again.

Tom identified it. "*Paralepsis*."

As the reel of film ran out, Tom switched off the projector and opened the window drapes. He was rewinding the film when a buzzer sounded.

"Til get it!" Bud hopped up from his comfortable leather chair at the conference table and flicked a lever on the desk intercom. "Yes?"

Miss Trent said, loud enough for Tom to hear, "There's a Mr. Otis at the main gate to see Tom. He's an attorney from Springthorpe and Quilby in New York."

Bud looked at the young inventor, who motioned Yes. "Tom says to send him up."

A few minutes later a tall, sprucely dressed man in his thirties was ushered into the office. "I'm Jason Otis," he said, "from the law firm that sent you that motion-picture film."

Tom shook hands, introduced himself and Bud, and invited Mr. Otis to sit down.

"I gather you've just been screening the film," the lawyer began.

"Yes," Tom said, "and I'd like very much to know why you sent it."

Otis looked a trifle embarrassed. "I hate to be mysterious, Mr. Swift," he said, "but this is a confidential legal matter involving one of our clients. However, Springthorpe and Quilby will pay you a generous fee for your professional opinion regarding those pictures."

"I'm afraid I don't understand." Tom frowned.

"The people who prepared that film," said Otis, "*claim* that it shows deep-sea fish which have been brought to the surface in a special tank for scientific study. As a deep-sea expert who has made many dives to the ocean floor, would you say their claim is

genuine?"

Tom was thoughtful for several moments. "That's a hard question to answer, Mr. Otis. The specimens shown are certainly deep-sea fish. But I saw nothing to indicate that they were in any sort of enclosure. Offhand, I would doubt it. In my opinion, the film was probably taken from a bathyscaphe-or perhaps by a deep-sea television probe."

Jason Otis leaned forward intently. "Can you back up that opinion in any way?"

"I'll try. Let's run the film through again," Tom replied.

He darkened the room and started the projector. Presently he pointed to a cloud of tiny crustaceans sweeping rapidly past the camera. "See how that plankton is moving? It's being carried along by a fast current-which is something that's often encountered at great depths."

"How do you know the camera itself wasn't moving?" Otis objected.

Tom pointed to the silvery *Paralepsis* which streaked upward and then froze motionless before diving again. "We know the camera was stationary for that shot."

Moments later came a sequence showing a slender, eel-like creature, its tail undulating like a whip. "And there's a *Halosaurus*," Tom added. "I've often seen them hover motionless just that way in a strong current."

"That's right," Bud declared. "They aim their noses into the current and wave their tails like that to keep from being swept away."

Tom cited other evidence that proved the fish were not in an enclosure. As he switched off the projector and opened the window drapes, he saw that Otis's face bore a pleased smile.

"You've convinced *me*, Mr. Swift," said the lawyer. "Now name your fee."

Tom gave a slight chuckle. "Forget the fee. I'm not used to being paid to see a movie."

Otis stood up. "We'll be sending a check to Swift Enterprises, nevertheless. Call it a slight contribution to oceanographic research."

After the attorney had left, Bud asked, "What do you make of all that?"

Tom shrugged. "It's a mystery to me, pal."

He spent the afternoon in his laboratory testing his experimental glass and casting several samples of slightly different formula. Late in the day Bud came rushing into the lab with news that an Air Force plane from Washington was about to land at Enterprises.

"Must be that team of observers we're expecting," Tom said. He told Bud about the call from Dr. Leo Palfrey.

The boys jeeped out to the airfield, where the military transport was unloading its four passengers. Tom hurried to greet them.

Two of the visitors-Seth Hafford of the National Observatory and thin, intense Dr. Wolfgang Beimler-were astronomers. Professor Dorp Linski, burly and white-haired, was a famous astrophysicist. A younger man, Errol Clay, whom Tom had met at Cape Kennedy, was an engineering expert on spacecraft and space telemetry.

"I'll take you over to the space prober right away and let Dad know you're here," Tom said. "He'll be eager to talk with you."

A technician came out of a nearby hangar and hailed Tom. "Miss Trent just called, skipper! She says to tell you the message from your space friends is now coming through!"

Tom and Bud were electrified by the news.

"You gentlemen may as well see this," Tom told his visitors. "The message may have something to do with that flying saucer."

The four visitors had heard of the space beings and were keenly interested. Tom briefed them further as they drove to the space communications laboratory.

He explained that the first message from the space beings had come to earth in the form of weird mathematical symbols. These were engraved on a black missile which had landed with pinpoint accuracy on the grounds of Enterprises.

By a difficult process of cryptanalysis, the Swifts had managed to decode the symbols. Soon they established radio contact with the unknown senders in outer space, using an oscilloscope to show the signals in visual form. All coding and decoding was now done by a special electronic computer which Tom had invented.

He and the group found Mr. Swift already at the space communications laboratory. After hasty introductions, he drew them over to the decoder. Odd symbols were flashing on its oscilloscope screen while teletype keys tapped out the translation.

"This is a fantastic message," he said in an excited voice. "I think you'll all be as thrilled as I when you read it!"

Tom and the others eagerly scanned the tape that had unreeled. It said:

SPACE FRIENDS TO SWIFTS. WE ASK YOUR HELP ON URGENT MISSION. AGES AGO EARLIER SPACE BEINGS MADE ATTEMPT TO PLANT COLONY ON EARTH. THEY LEFT SEALED CACHE THERE WITH GAS-MAGNETIC-FIELD DATA WHICH COULD BE OF GREAT VALUE TO OUR SCIENTISTS. WE HAVE LEARNED LOCATION OF CACHE ON EARTH IS-

A series of figures followed, giving the exact position by star triangulation.

"Wow!" Bud blurted. "So earth *has* had visitors from outer space!"

Tom's pulse was racing. From clues picked up on several expeditions, he had long been convinced that such colonizing attempts had taken place. And now here was proof! He read on:

WE REQUEST THAT YOU GET MATERIAL FROM CACHE AND TRANSMIT TO US BY CARGO ROCKET. CORRECT TRAJECTORY WILL BE GIVEN LATER. WE IN TURN WILL SEND YOU REWARD. important! please proceed SECRETLY. OTHER SPACE BEINGS, DANGEROUS TO US AND YOU, ARE ALSO SEEKING CACHE.

"Incredible!" exclaimed Dr. Beimler. "An earth colony of creatures from another planet! This could be the most important scientific news of our generation!"

"But their reference to 'gas-magnetic-field data' puzzles me," Professor Linski declared. "This I do not understand."

"Nor do I," Mr. Swift said thoughtfully. "The data must be recorded in some form that's completely unfamiliar to us." He added, with a glance at Tom, "I'm also wondering about those 'other space beings' and just how 'dangerous' they may be."

"So am I, Dad," Tom replied. "This could explain the appearance of that flying saucer."

Errol Clay looked startled. "You mean it may belong to those 'other space beings'?"

"Exactly," said Tom.

Mr. Swift frowned uneasily. "Suppose we try to find out by asking our space friends."

Tom switched on the electronic computer for coding and sending, then beamed out a query across the vast reaches of space. A tense silence settled over the group as they waited for a reply.

Minutes went by, but there was no ring on the machine's alarm bell to signal an incoming message. Tom and his father exchanged worried glances as their vigil lengthened.

Was the reply being jammed or blanked out by the enemy space creatures? Were the Swifts' space friends merely afraid of being "overheard"?

Or had something much worse happened-perhaps dooming any further hope of communication between earth and its unknown neighbor!

CHAPTER V

MASKED HORSEMEN

"MAYBE the saucer is a mystery even to your space friends, Tom," said Bud as the group in the observatory stirred restlessly.

Tom was puzzled. "That's hard to believe- especially if it's extraterrestrial."

"What about the location of that data cache, or time capsule?" asked Seth Hafford.

"I'll work it out right now," Tom said. He strode across the room to one of his "Little Idiot" computers.

An instant after speaking the star triangulation data into a microphone, Tom read the printout off a tape. The answer was given in latitude and longitude figures, plus a radial distance from the earth's center.

"That w'ould be several miles below sea level," Mr. Swift remarked with a frown.

Tom pulled down a chart from a wall roller and fingered the geographical position-far off the western coast of South America. "It's about a hundred and fifty miles south of Easter Island."

Bud let out an awed whistle. "That must mean the cache is at the bottom of the Pacific Ocean!"

"I think we should look for it immediately, don't you, Dad?" Tom questioned.

"Yes, definitely," said the elder scientist. "But my schedule's very tight just now on this bionics project for the Defense Department. I'm afraid that puts the job up to you, son."

Tom's steel-blue eyes lit up with excitement. "In that case, I'd like to start out Monday morning. How about it, fly-boy?"

"The sooner the better!" Bud declared.

Before proceeding with his plans, Tom accompanied his father and the government scientists to the observatory atop the Main Building. The blue saucer was still hovering in orbit.

"Fantastic!" murmured Errol Clay as the group studied the craft on the proper viewing screen. "It certainly isn't powered by any method of propulsion known to American space engineers."

All agreed that no move should be taken against the spaceship for the time being. They would watch it carefully, however.

Tom worked at a feverish pace over the weekend, organizing supplies for the expedition and detailing a crew for the *Sea Hound*. Chow, as usual, would go along as cook. For crew chief, the young inventor chose Arvid Hanson—a big genial craftsman who usually built the pilot models of Tom's inventions.

Monday at dawn the sleek seacopter zoomed into the sky from Fearing Island. Tom set a great circle course that took them to the Gulf of Mexico, then across the jungled greenery of Central America to the blue sweep of the Pacific. After three hours of flight over open ocean, a speck of land appeared below.

"There's Easter Island," Tom said.

Minutes later, the *Sea Hound* swooped down onto the brilliantly sunlit waves. Tom reversed the rotors for diving and moved the control wheel forward. The seacopter plunged like a porpoise into the blue-green depths.

Soon gaudy-colored fish darted past their cabin window. The water darkened to violet, then gray, until at fifteen hundred feet or more they entered the realm of perpetual night.

Suddenly loud noises erupted from the hydrophone speaker. In the yellow glare of

their search beam, the boys glimpsed the cause-a black cachalot whale fighting off the waving, reddish-purple tentacles of a giant squid.

"A duel to the death!" Bud gasped.

"And who'd ever guess it topside?" Tom remarked. "The oceans hide some grim secrets."

"Speaking of secrets," said Bud, "are we over the cache?"

Tom glanced at the dials of their automatic navigator. "Just about."

Deeper and deeper the *Sea Hound* sank. They were three miles below the surface when the seacopter finally settled to a halt on the bottom.

"Boy, what a landscape," murmured Arv Hanson, who had come forward to peer out at the barren scene.

Here and there could be seen an upthrusting fold of rock or a scattering of mineral nodules. Nothing else broke the gray-brown monotony of the ocean floor.

"We're on the slopes of the East Pacific Rise-a chain of submarine mountains," Tom said.

He moved a lever to extend the crawl treads, and the *Sea Hound* began to rumble slowly along the bottom. Minutes later, Tom stopped the craft.

"The cache should be right around here, if our space friends' fix was accurate."

Chow squinted out the cabin window and shook his head. "Brand my shellfish," he muttered, "I don't see nothin' out there but sea muck!"

"Neither do I," Tom admitted, playing the search beam over the ocean floor. "This *could* be like hunting for a needle in a haystack."

"And we don't even know what the needle looks like," said Bud.

The two boys squirmed into Fat Man deep-sea suits. These were shaped like thick steel eggs and equipped with remote-controlled mechanical arms and legs.

Tom and Bud emerged from the *Sea Hound's* air lock, and began to search the area. They circled outward from the *Hound* until they had combed more than a square mile of the sea floor.

"Any luck?" Bud called over his sonarphone.

"Not a trace," Tom replied. "We may as well go back to the ship."

Once aboard, the hydronauts cruised back and forth in a wide search pattern, employing a variety of instruments-Tom's radiation-sensitive Damonscope, his father's metal detector, and "MAD"-a magnetic anomaly detecting device. Tom also used a powerful hypersonic transducer to probe the silt. None gave any clue to the space cache.

Tired and discouraged from their fruitless search, the seacopter's crew sat down to a late-night snack before retiring.

"Look, skipper," Arv said, "how do we know the cache is still here? If it was planted ages ago, the ocean floor might have shifted, or the cache could have been washed away by undersea currents."

Tom frowned thoughtfully and shook his head. "No, I doubt that, Arv. My hunch is that our space friends determined the position of the cache just recently. If those figures they gave us weren't a reliable fix, I'm sure they would have warned us."

Bud said gloomily, "Maybe the enemy space creatures beat us to the punch and grabbed the cache." He added as an afterthought, "Hey! That might even explain what the spooky blue saucer was doing above the Pacific!"

Tom looked worried. "You mean it was raising the cache somehow?" he asked. "Hmm! If that did happen, Bud, there's a possibility that fishermen from Easter Island would have spotted something unusual happening. We'd better go there tomorrow and check up."

Early the next morning the *Sea Hound* surfaced and flew north to the lonely little isle. On the way, Tom told what he had read about it. Called Rapa Nui in the native tongue, the island had been discovered by Dutch Commodore Roggeveen on Easter Sunday, 1722. Like later visitors, he had been astounded and mystified by its hundreds of gigantic stone statues-all with the same weird, sneering face.

Its Polynesian people had had numerous unhappy contacts with outsiders. Many had been carried off by Peruvian slavers in 1862. Finally Chile had taken over the island. Now the natives numbered more than a thousand and the island was used for sheep raising.

"Those big stone statues-what do they represent?" asked Bud.

"No one knows," Tom replied. "It's amazing that they could even have been quarried

and erected on such a tiny, remote land speck."

Soon the seacopter hovered down over Easter Island. Cliff-girded and ringed by jagged black lava reefs, the island was green and hilly, with several extinct volcanic craters.

"Look! There are some of the statues!" Tom said, pointing. The huge pieces lay face down, along a crumbling stone platform near the shore. "I've read that they stood on burial platforms, or mausoleums, all around the island," Tom added.

He landed the *Sea Hound* in a field between a small airstrip and Easter's only village, Hanga Roa. A Chilean Navy officer, Lieutenant Moreno, came to meet them in a jeep. Tom explained that he was engaged in undersea exploration and asked if any unusual sights had been reported at sea south of the island.

"What sort of sights, *senor*?"

"Anything out of the ordinary. I'm-er- checking a theory connected with something that may have happened on the ocean floor."

"Ah, a volcanic activity perhaps." Moreno assured Tom that nothing unusual had come to the attention of his small Naval and Air Force base, then said, "But our governor will be most eager to see the famous Tom Swift. Allow me the honor of escorting you to his residence."

As Tom and Bud rode into town in the lieutenant's jeep, excited islanders, mounted on wiry horses, came galloping toward them. The people were raggedly dressed, but greeted the visitors with gay, friendly smiles.

"*la-o-rana!*" they chorused.

At Lieutenant Moreno's whispered suggestion, the boys called back, "*la-o-rana korua!*"-Good day, everyone!"-the island's traditional greeting.

The village of white-painted houses with iron roofs was fenced off from the surrounding grazing land. Captain Perez, the governor, who wore a khaki uniform with gold epaulets, insisted that Tom and Bud stay to breakfast.

Just as they were finishing the meal, an elderly American stopped in to say hello. He was in shirtsleeves and wore a sun helmet.

"This is Professor Tyburn, a countryman of yours." Captain Perez introduced him to the boys. "He is an archaeologist who has come with a group to dig among Easter's

mysterious ruins."

The professor was delighted to meet two fellow Americans. He offered to show the boys the great statue quarry at Rano Raraku, a crater near the northeast corner of the island. "It's a sight you'll never forget," he said.

Tom and Bud gladly accepted. After sending word to the *Sea Hound*, they set out on horseback with the professor. The trail across the island was strewn with sharp volcanic rocks which would have cut their shoes to ribbons.

"Now you see why everyone rides," said Professor Tyburn. "There are actually more horses on Easter Island than there are people."

It was nearing noon when the group reached the quarry. The boys were awe-struck at sight of the huge stone figures littering the grassy slopes of the crater. All the heads were long, thin, and flat-backed-with the same jutting chins, long ears, and tight, sneering lips.

Bud gasped, "Good grief! This is as weird as finding a herd of elephants at the North Pole!"

"Many of these statues are thirty feet high and weigh close to a hundred tons," said Professor

Tyburn. "One lying up there on the side of the volcano measures sixty-nine feet. Imagine what the weight is!"

Some figures were buried in earth up to their chests, while others lay flat on their backs. A few were only partly quarried. Stone picks and adzes lay about as if workmen had suddenly dropped their tools and fled.

While Tom and Bud ate lunch with the digging crew, Professor Tyburn explained that the figures on platforms around the shore had worn red-stone topknots. He told of the legendary chief, Hotu Matu'a, who had first sailed to the island from out of the sunset.

"But Easter's history is still shrouded in mystery," he ended.

After clambering about the craters to inspect the statues, the boys started back. Their horses jogged southward along a coastal trail. Professor Tyburn had said this would take them past several of the stone burial platforms.

Suddenly a volley of weird yells split the air. Tom and Bud glanced around in

surprise. Three horsemen were galloping toward them, wearing strange, ferocious-looking masks!

"Jumpin' jets!" Bud exclaimed. "Who are they-South Sea highwaymen?"

"I don't know," Tom said in a puzzled voice, "but I sure don't like their looks."

"Come on! Let's not stick around and find out!" Bud said, urging his horse forward.

Tom heeled his own mount into action. Soon they were racing at top speed along the rocky trail. Tom's heart gave a jolt as he saw his friend's horse stumble over a stone. Bud went flying out of the saddle!

Tom yanked his whinnying mount to a halt. As he leaped to the ground to assist Bud, Tom's pulse quickened fearfully.

The masked riders were bearing down on them fast!

CHAPTER VI

THE BIRD MAN

LUCKILY Bud was unhurt. He struggled to his feet as Tom hurried toward him.

"Are you all right?" Tom asked anxiously.

Bud winced and rubbed the seat of his pants. "No bones broken, but I can see right now that I was never cut out to be a rodeo rider."

It was now hopeless to escape the men who were pursuing them. The boys stood their ground as the three masked riders halted nearby.

"*Buenos dias*" said the leader, dismounting. "We do not mean to harm you, *senores*." Like the workmen in the digging crew, and other islanders, he used a mixture of Spanish and English to address the boys.

In spite of the man's friendly words, Tom noticed that the trio wore knives in their belts and seemed ready for trouble. Bud stared at their eerie masks. Made of polished wood, they portrayed hideous, hook-nosed faces with chin beards and long, dangling ear lobes. They looked like the carved statuettes of evil spirits which the villagers of Hanga Roa had offered for sale.

"If you come as friends, why are you afraid to show your faces?" Tom asked.

Instead of answering, the man said, "*Senor*, are you *tangata manu*-the bird man?"

"You mean, am I one of the Americans who flew to the island this morning?" Tom inquired. "If so, the answer is Yes."

The man hesitated. "I mean more than that, *senor*. There can be but one *tangata manu*. Are you he?"

The boys looked at each other blankly.

"I'm afraid I don't understand," said Tom.

There was a moment of uneasy silence. Then another of the trio spoke up. "Perhaps he is indeed *tangata manu* and does not know it!"

The three masked men began to converse excitedly in their native language. At last they reached a decision. Plucking the knives from their belts, they closed in on Tom and Bud.

"Do not fight and you will not be hurt, *hombres*," said the leader. "Be wise and turn around so that we may tie your hands."

The boys exchanged hasty glances, debating whether or not to put up a struggle. Against fists alone, neither would have hesitated, but knives made the odds too risky.

"We'd better do as he says," Tom muttered.

The men took ropes from their saddles and bound the boys' wrists behind their backs. Tom and Bud were hoisted aboard their horses again. Then the group rode along the trail to a point where a steep path led down the cliff to the water's edge. Here they dismounted.

"Don't tell me we have to climb down there with our hands tied!" Bud said.

"We will lower you with a rope, *senor*."

After the boys had reached the shore, one of the masked men stayed to guard them. The other two rode off. Tom and Bud waited anxiously.

The afternoon sun was lowering in the sky when their guard's companions finally returned. Each carried a huge bundle of totora reeds, which grew in the marshy crater lakes.

"*Vamos!*" said the guard, prodding the boys to their feet. "Come along!"

Tom and Bud were marched along the shore to a spot where a break in the black lava reefs provided a small cove. An outrigger canoe lay drawn up on the beach. The boys were herded aboard and the masked men pushed off.

Paddling smoothly, the trio headed well out beyond the breakers, then guided the canoe toward the beetling cone of Rano Kao-the extinct volcano at the southern tip of Easter.

Bud glanced at Tom uneasily. "Where are they taking us?"

"Search me!"

Beyond Rano Kao lay three tiny islets-one, a mere rocky spire. The masked men paddled toward the largest one, a mile from the coastal cliff.

As the canoe landed on the islet in the pounding surf, a flock of mewing seabirds rose up from its crest and winged across the water to the neighboring rocky spire.

The boys were taken ashore. One native emptied their pockets and untied their wrists while the other two unloaded the bundles of eight-foot-long reeds. Then the trio prepared to push off.

"Wait!" Tom exclaimed. "You're not going to leave us stranded here?"

"If you bring back the egg, *senor*," said the leader, "the sacred stone is yours I"

The three masked men paddled away.

"Of all the dirty tricks!" Bud fumed. "What did he mean, anyway?"

Tom gave a helpless shrug. "I don't get it."

In a few minutes the outrigger had disappeared around the towering headland of Easter Island.

"Boy, we're really in a fix," Bud said. "They even stole your pencil radio. How're we going to get off this rocky prison?"

"I guess we're stuck here, pal, until someone spots us." Tom pointed to a fin gliding through the water beyond the breakers and added, "Unless you want to risk swimming past the sharks."

Bud shuddered. "No, thanks."

To pass the time, the boys explored the islet. They found several caves, overgrown with weedy grass. Inside were human bones and, in one, a red wall painting of a fearsome head.

"What a place to get stranded!" Bud groaned.

Night fell with no sign of rescue. The boys untied the bundles of reeds on the beach and used them as mattresses. Soon they fell asleep beside the thundering surf.

Daybreak found them stiff and hungry. The rocks grew broiling hot in the rising sun.

"Man, I'm about ready to face those sharks," Bud grumbled. "How about you, genius boy?"

"Same here." Tom rubbed his jaw thoughtfully. "You know, Bud, I've seen reed boats in South America. We could make two out of these reeds."

"Two boats? We haven't enough for one."

"We have for the kind I'm talking about." Tom began bundling the long reeds into two separate sheaves, each shaped like a huge, curving tusk. Then he tied each sheaf at several points with the ropelike vines which the natives had used.

Bud watched in puzzlement. "Those are boats?"

"Well, call them floats," Tom replied. "We'll lie on them and paddle with our arms and legs. That way we won't be quite such shark bait."

Bud exclaimed, "Boy, you *are* a genius!"

Before starting off, Tom scrambled up among the rocks and brought back a sooty tern's egg from one of the bird nests.

Bud grinned. "What's that-an Easter egg?"

Tom chuckled. "No, I was thinking about the remark the masked man made. If an egg will get me that sacred stone, I intend to qualify."

The boys picked up their reed floats and a few sharp rocks to use as anti-shark weapons, then waded out past the breakers and launched themselves into the water. Bud was amazed at how well the frail craft worked. Soon they were gliding swiftly toward

the mainland.

Halfway across, Tom yelled, "Watch it! We've got company!"

A deadly-looking fin was knifing toward them! Both boys quickly withdrew their arms and legs from the water. The shark nudged Bud's float slightly, then lost interest and swam off.

"Whew!" Bud flicked perspiration from his brow. "That's as pally as I ever hope to get with those babies!"

The boys resumed paddling. As they neared Easter Island, Tom's face blanched. In the crystal-clear water, he could see a striped form streaking in his direction. A tiger shark! It zoomed upward.

Tom knew the uncertain temper of sharks—a blow could frighten it off, or only enrage it. As the snout broke water, he raised his arm and hurled a razor-sharp stone. The shark darted away! Tom went limp with relief.

Bud, who had watched in horror, called, "Nice going, boy! You just made the team!"

Redoubling their efforts, the boys quickly stroked through the remaining stretch of water to the lava reefs. Both boys were skinned and cut when they finally clambered ashore.

"Now comes some more fun." Bud gazed up the steep volcanic headland which they would have to climb. Suddenly he gasped, "Look!"

Three tiny figures could be seen waving down at them from the topmost rim of the crater.

"I'll bet they're the masked men!" Tom exclaimed. He hastily held up the tern's egg. The men atop the cliff broke into loud cheers.

Grinning, Tom tucked the egg into his hip pocket. Then the two boys began the hard climb upward. Battering seas and weather had eroded the cliff until it was almost vertical. The boys had to grope for hand- and footholds. The trio urged them on with yells.

The climbers were nearing the top when Tom's foot slid off a slippery rock. Bud's heart almost stopped as he glimpsed the sudden startled look on his pal's face. With a cry, Tom plummeted downward!

CHAPTER VII

THE SACRED STONE

SICK with fear, Bud saw Tom plunge toward the jagged reefs. He closed his eyes to shut out the sight, then opened them as a joyful shout went up from the men on the crater's rim.

Tom had stopped his fall by clutching a rocky outcrop on the cliff face!

Bud watched, almost afraid to breathe, as Tom slowly struggled for a fresh foothold and at last clambered back up. Tom's sunburned face was mottled with blotches of chalky white. Rivulets of perspiration dripped from his forehead and cheeks.

"What are you trying to do-give me a heart attack?" Bud asked.

Tom grinned. "Practicing for the paratroops."

The rest of the climb was uneventful. Both boys took no chances, testing every placement of hand or foot before moving upward. Finally, as they neared the crest, the three islanders, no longer wearing masks, reached out and pulled them over the edge.

As Tom and Bud stood panting, the leader of the trio said, "The egg, *senor*-you have it?"

Tom reached back to his hip pocket and gently extracted the tern's egg. It was unbroken! The men gazed at it with cries of delight. All three fell on their knees and bowed low before Tom. The two youths stared in amazement.

"Look," Tom said to the islanders. "You've given us a hard time. Now tell us what this is all about."

"*Ariki*," said the leader, "when you landed out of the skies yesterday in your strange flying boat, we felt sure that Rapa Nui's last bird man had come back to life. Now you have proved it-and the sacred stone is yours!" The man sprang to his feet and darted off.

Tom and Bud saw him crawl through the doorway of a low-roofed, half-underground stone hut. The boys now noticed that a number of such huts had been built on the rim of the crater.

As the two Americans looked around, Bud clutched Tom's arm and pointed. The huge basalt rocks atop the cliff were covered with strange petroglyphs.

"Nice stone carvings," Bud remarked.

Many showed a man with the head of a long-billed bird, holding an egg.

"*Tangata manu*-the bird man," explained one of the islanders.

Tom decided that the "bird man" must have been part of an ancient religious cult on Rapa Nui. Somehow, by bringing back the tern's egg, he himself had won the title.

Presently the leader came out of the hut, carrying a small, flat stone tablet, which he gave to Tom. On it were rows of queer, carved symbols.

As Tom's eyes blazed with excitement, Bud whispered, "Hey! Those look a bit like the symbols your space friends use!"

"They sure do." Tom had discovered such symbols on earth before, in the jungles of Yucatan and on a pyramid near the underwater city of gold in the Atlantic. Both finds seemed to indicate landings by space beings in some ancient time.

"Where did you get this?" Tom asked.

"The fathers of our fathers' fathers were the last priests of Easter Island," replied the leader. "They were keepers of this sacred stone."

"It was secret for a hundred years. Our fathers passed it down to us," said another. "They told us that some day *tangata manu* would return to Rapa Nui from out of the sky. Now we know that you are the one."

A third man said, "We left reeds to see if you would use them. You made a raft from them, like the ancient ones, and you brought back an egg."

"What has happened today must be secret from those who are not of our island," said the first man. "But we will tell our own people. From now on, you will be *ariki mau*-our king."

Tom was flabbergasted. He said helplessly, "I-I appreciate the honor. But are you sure you're not making a mistake?"

The three islanders shook their heads solemnly. "We make no mistake, *ariki*."

To celebrate the occasion, the natives served the boys a delicious meal of chicken, wrapped in banana leaves and baked in an earth oven. This was followed by melon and pineapple.

As they ate, Tom asked the men, "Do you know what the carvings on the sacred stone mean?"

All three shrugged and again shook their heads. "We cannot read the signs," said one, "but we know they tell of a great land which sank beneath the ocean long ago."

Tom was startled and tried to question the men further. But none of them could tell him any more. Afterward, the boys were escorted down the landward slope of Rano Kao. Their horses had been tethered below, and the objects taken from their pockets had been safely stowed nearby. The islanders shouted and waved farewell as the two boys rode off.

"Well, how does it feel to be a king?" Bud asked jokingly.

"Plenty sore, after climbing over the reefs and scaling that cliff," Tom said, grinning. "But I'd sure like to know what's written on that sacred stone."

"Think you can decode those symbols?"

"I certainly intend to try. Knowing the regular symbols should help a good bit."

When the boys reached the *Sea Hound*, their scratched, grimy appearance drew a barrage of excited remarks from the crew.

"Brand my coyote cutlets," Chow exclaimed, "you two look like you jest been bronc-bustin' in a thicket o' chaparral! What happened?"

Tom related their adventure, and Bud added, "Weren't any of you sack artists even worried enough to come looking for us? We could still be stuck out on that seabird roost if genius boy hadn't thought of making those rafts!"

"Sorry, no. We assumed you were camping overnight at that professor's work site," Arv explained. "I figured you would've called over Tom's pencil radio if you had been in any trouble."

"It doesn't matter," Tom said good-naturedly. "As far as I'm concerned, it was worth going through the whole deal to get this stone."

Tom ordered the crew to prepare for takeoff. As soon as he and Bud had bathed and changed their clothes, and the horses had been returned to Hanga Roa, the *Sea Hound* zoomed skyward over the island. Presently it lowered to the foot of Rano Raraku.

Leaving the crew to gaze and exclaim at the eerie stone statues, Tom and Bud strode

up the slope to talk to Professor Tyburn.

"Delighted to see you again, boys," said the archaeologist. "You look as if you have something on your mind, Tom."

"Yes, I have, sir. Can you tell us anything about *tangata manu*?"

Professor Tyburn's snowy eyebrows shot up. "The bird man? Why, yes. He was part of a pre-Christian ritual here. Every year, in July, the rival chiefs would gather on Orongo, the old stone village up on Rano Kao crater, to watch for the arrival of the sooty terns on the islet of Motu Nui. There was a sort of contest that involved swimming out on a reed float, getting the first tern's egg, and bringing it back to Orongo. The chief who got the egg was designated by the priests to be the bird man-a sort of god-king-for the coming year."

"I see." Tom nodded, then showed him the stone tablet. "What do you make of this, sir?"

Professor Tyburn examined the tablet eagerly. He gave a gasp of excitement. "Great heavens, Tom! This is a tremendous find! So far, the only written records found here have been hieroglyphics carved on what are called *rongo-rongo* boards. But these symbols are quite different! They may shed great light on the mystery of Easter Island. Where did you get it?"

"It was given to me by some of the islanders, but

I can't reveal any more than that," Tom replied. "One thing more, sir. Do you believe in the theories connecting Easter Island to a lost continent of the Pacific?"

The professor smiled and shrugged. "A hard question, Tom. There are many legends to that effect, but I know of no scientific evidence to support them."

Tom smiled back. "Perhaps the carvings on this stone may provide some support. I'll let you know if my father or I manage to translate them."

As the *Sea Hound* took off again, Tom's facial expression showed his suppressed excitement.

Bud shot him a quizzical glance. "What's steaming in that high-pressure cooker of yours, genius boy? I can tell the symptoms."

Tom grinned. "Bud, I have a hunch about what happened to the space cachel"

CHAPTER VIII

WARNING FROM SPACE

BUD stared eagerly at Tom as the seacopter jetted southward from Easter Island. "You mean you've figured out why the cache wasn't at the fix position your space friends gave us?"

"Just a hunch, that's all," Tom said. "I'm not implying that the fix was wrong. It may have been more precise than we realized."

"I don't read you, skipper."

Tom gave Bud a mystifying smile. "You'll soon see what I'm getting at."

The *Sea Hound* held course for about a hundred and fifty miles. Then Tom brought the craft down and sent it plunging into the ocean.

The whirring rotor churned a frothy wake of bubbles as the craft sank from the glassy green zone of daylight into inky darkness. Bud switched on their search beam. Minutes later, the *Sea Hound* came to rest on the bottom.

Tom levered the crawl trends into action and the craft rumbled forward across the ocean floor. He watched the automatic navigator and presently brought the seacopter to a halt.

"Okay, so we're dead on fix," Bud said. "Now show us the cache."

"Cut the kidding, fly-boy," Arv broke in as he came forward from the engine compartment. "We already know it's not around here. What's the use of looking again, skipper?"

"Maybe we didn't look in the right spot," Tom replied. "What's our depth, Arv?"

Hanson stepped over to an instrument panel. "Fifteen thousand, nine hundred feet."

Tom checked a paper on his chart desk, then made some hasty computations. "According to the fix," he announced, "the cache is more than *nineteen* thousand feet below sea level."

Bud and Arv stared in amazement.

"Good night!" Bud gasped. "Then it's buried way under the sea floor!"

Tom nodded wryly. "Yes. Allowing for about eight hundred feet of sediment around here, the fix places it almost half a mile below bedrock. I goofed by not checking the depth before."

"What made you think of checking it now?" Bud asked.

"That sacred stone-and the natives' story about a land that sank beneath the ocean."

"Wait a second!" Arv said. "Are you assuming that the stone was carved by the space creatures who planted a colony on earth?"

"It must have been, Arv," Tom stated. "Either by them or by humans who'd known them. I haven't had time to study the stone properly, but I'm convinced it's not a coincidence that the symbols resemble space code."

Bud said excitedly, "Then you think the cache was hidden away before this so-called lost continent was submerged below the Pacific?"

"Right, Bud. If the legend's true, there must have been a vast upheaval, caused by earthquakes or volcanic activity. The land not only sank and flooded over, but parts of it may have crumpled under the tremendous pressure."

"And the cache ended up half a mile under the present ocean floor?"

"Exactly."

Arv looked impressed. "Man, you've really taken on a job, skipper. How can you get at the cache-with an atomic earth blaster?"

This fantastically powerful digging device could vaporize rocks on contact. Tom had invented it to drill for iron in Antarctica, and later had used it to tap an undersea helium bed.

He shook his head thoughtfully. "No, the blaster might vaporize the cache along with the rock. The atomic electrodes make it impossible to see what's ahead by TV or radar."

"Then how can you do it, Tom?" Bud asked.

"That'll take some thinking. I'd say the ideal answer is some sort of piloted drilling device-a craft that burrows underground."

Bud's eyes lit up excitedly. "A subterranean rocket ship! How about whipping one up on your drawing board?"

Tom chuckled. "Give me time."

On the long flight home, Tom let Bud do most of the piloting. The young inventor sat gazing out the cabin window, his brow furrowed in deep thought. When they arrived at Fearing Island, the two boys and Chow boarded a Whirling Duck for the hop back to Shopton.

It was past five o'clock when their helijet touched down at Enterprises. Tom, eager to report to his father, hurried with Bud straight to the Swifts' double office.

"Welcome back, boys!" The elder scientist greeted them with warm handshakes. "I got your radio message, son, but I'm eager to hear all the details firsthand."

Mr. Swift listened with keen interest as Tom and Bud related all that happened on the expedition. He was amazed at his son becoming a "king," and excited by the appearance of the symbols on the sacred stone. "It will be thrilling to analyze this script," the scientist declared. "Wish we could tackle it right away, but finding the space cache is more urgent. Any ideas on the subject, Tom?"

"Yes, Dad. I think I can design a craft for underground exploration based on the repelatron principle."

This principle made use of the distinctive subatomic radiation given off by each element, to generate a force for repelling matter. Tom had utilized this repulsion force in his deep-sea hydro-dome, and also to propel his great moon-voyaging spaceship, the *Challenger*.

"My underground vehicle," Tom explained, "will worm its way forward while pushing away the dirt and rocks on all sides."

Mr. Swift was immediately intrigued by the idea. "It will take tremendous force to penetrate bedrock," he mused, "but an atomic-powered repelatron may do it."

"Of course, Dad, the vehicle will need mobility aboveground and also must be capable of operating as a submarine to reach the ocean floor."

"Wow! What an order!" Bud exclaimed, wide-eyed. "Sort of a subocean mole-mobile."

Tom grinned and went on to sketch out the craft which he had in mind. Both Bud and Mr. Swift were enthusiastic.

"This sort of vehicle could have terrific possibilities for undersea prospecting, too,"

the elder inventor declared. "I'd like to see you develop the idea further."

"I'll get busy on it tomorrow, Dad. Right now, I'd like to check on that mysterious flying saucer."

"Good idea. Let's go up to the observatory." The telephone rang and Mr. Swift paused to answer it. George Billing, Enterprises' radio chief, told him excitedly, "The space coder's picking up a message, but it's not from your regular space friends!"

Mr. Swift was startled. "From whom, then?" "I don't know. When the senders identified themselves, the machine had difficulty translating-it came out as 'space legion.'" "We'll be right over!"

Mr. Swift and the boys quickly jeeped to the space communications laboratory. The coder had just finished typing out the message. It read:

SPACE LEGION TO SWIFTS. WE ASK YOU TO RECOVER CACHE OF SPACECOLONISTS' RECORDS FOR US INSTEAD OF FOR YOUR REGULAR COMMUNICATORS. IN EXCHANGE WE OFFER YOU SECRET WEAPON MORE POWERFUL THAN ANY KNOWN ON EARTH. PLEASE ANSWER.

"It must be from those other space beings that your space friends warned us about!" Bud guessed.

"I'd say they're certainly dangerous if they think in terms of weaponry," Mr. Swift said.

"And probably not to be trusted," Tom added. "If the data in the space cache includes the secret of adaptation to our atmosphere, they could use it to invade the earth!"

Mr. Swift and Tom agreed that the offer should be rejected. Before doing so, Tom suggested they parley and try to get more information on the senders. He beamed out a message:

SWIFTS TO SPACE LEGION. DOES FLYING SAUCER NOW ORBITING EARTH BELONG TO YOU?

Soon the signal bell on the machine rang and a reply was typed out on tape:

WE AWAIT ANSWER TO OUR OFFER.

"I think we'd better let them know at once where we stand," Mr. Swift decided.

Tom transmitted a refusal, saying they could not break their promise to their space friends. Back came the response:

WE ADVISE YOU TO RECONSIDER. OUR RECEIVER WILL BE KEPT TUNED TO YOUR WAVE LENGTH. YOUR REGULAR SPACE COMMUNICATORS ARE OUR ENEMIES. DO NOT HELP THEM OR YOU WILL SUFFER TERRIBLE CONSEQUENCES!

CHAPTER IX

DEEP-SEA LEGACY

"THE nerve of them!" Bud burst out.

His remark followed an uneasy silence after the coder teletype finished clicking out the frightening message.

At last George Billing spoke up. "Do you suppose that warning is on the level?"

Mr. Swift shrugged anxiously. "I wish there were some way to be certain. My feeling is that they're trying to bluff us. But we have nothing to fear from them-yet."

Tom agreed. "Like our space friends, they probably can't exist in our earthly atmosphere. Otherwise, they wouldn't need *us* to get the cache."

"How about checking with your space friends again?" Bud suggested.

Tom immediately beamed a report on the enemy offer to the friendly space beings. In moments the coder tape began reeling out their reply:

WE HAVE ALREADY MONITORED YOUR CONVERSATION WITH SPACE LEGION. THANK YOU FOR YOUR LOYALTY. BE ON GUARD AGAINST MOVES BY SPACE LEGION. WE WILL TAKE COUNTER-MEASURES HERE.

Tom signaled back, inquiring about the blue spacecraft. Their friends responded:

WE HAVE IT UNDER OBSERVATION. SUSPECT THAT IT IS ENEMY CRAFT PROBING FOR CACHE LOCATION. PREFERRED NOT TO ANSWER YOUR EARLIER QUESTION UNTIL SPACE LEGION REVEALED THEIR INTENTIONS OPENLY.

A short time later the Swifts, Bud, and Billing were talking over the situation when two of the government scientific observers, Seth Hafford and Errol Clay, hurried in.

"We just lost the saucer from view a couple of minutes ago!" Hafford reported. "It took off so fast we couldn't keep the space prober trained on it."

Tom exchanged thoughtful glances with his father. "Right after we turned down the Space Legion's offer! From the timing, I'd say that craft probably belongs to them, Dad. They left as soon as our communication ended."

Hafford and Clay looked puzzled.

"The Space Legion! What's that?" Clay asked.

Tom showed them the tapes of his conversation with the rival space group.

Hafford's face grew troubled. "This threat sounds serious. I think you should inform the Defense Department."

"A good suggestion," Mr. Swift agreed.

The following morning Tom drove to the plant early and set to work designing his undersea mole. He clamped a block of wood in a lathe and whistled thoughtfully as he machined a small model. When finished, it looked like two cones pressed together, with a pointed nose and stern. The midsection, where the cones joined, was smooth.

"The repelatron placement," Tom mused as he held the wooden model in his hand and viewed it from various angles, "could be a bit tricky. Let's see. I'll need a central repelatron radiator right in the nose . . . and maybe the auxiliaries can be recessed in longitudinal rows running aft."

Tom placed the model on his workbench, and settled down to the preliminary paper work. Power plant, oxygen system, submarine features, ground locomotion-all would require careful thinking-through before he could farm out the design details to staff engineers.

"Dad's right. The power plant is my main problem," Tom decided.

As usual, when Tom was busy on a new invention, Bud lunched with his pal in the laboratory. While they consumed bowls of Chow's delicious Texas chili, the husky copilot examined Tom's wooden model.

"Looks as though your mole-mobile is going to be a real needle-nosed torpedo. How

come it's pointed fore and aft?"

"Well, the pointed nose is for easier penetration-just like an awl," Tom explained. "And the ground will close up behind the craft as it worms its way forward. That's why I've given it a tapering stern."

"You mean it won't make a tunnel?" Bud asked.

Tom shook his head. "No, the repulsion force of the repelatrions will simply push open a path for the craft. Then, as it moves forward, the earth and rock will spring back into place."

"I see what you mean," Bud said. "For this project, you don't need a tunnel."

After lunch Tom continued working on his sketches and computations. Bud was about to leave when the telephone rang.

"Tom Jr.'s lab. Bud Barclay speaking."

"This is Wilson at the main gate. There's a gentleman here to see Tom. His name is Cyrus A. Springthorpe. So help me, he's got a three-legged fish with him!"

"What!" Bud exclaimed.

"You heard me-a three-legged fish." The guard sounded upset. "This fellow Springthorpe may be a phony, or a nut. What'll I tell him?"

"Hang on a second till I ask Tom."

The young inventor looked up as Bud reported the visitor. "Cyrus A. Springthorpe? He's one of the partners in the law firm that sent me the deep-sea film! Sure, tell the gate guard to let him in."

As Bud hung up, Tom grinned. "Better stick around."

Presently they saw a jeep pull up in front of the laboratory building with a plant guard at the wheel. Beside him sat a distinguished-looking, white-mustached man in a Homburg hat. A few minutes later there was a knock.

"Come in!" Tom called. He rose as the visitor entered, carrying a large plastic case. After handshakes and introductions, the attorney put his case on a workbench, unsnapped the lid, and took out a grotesque stuffed specimen.

Bud's eyes bulged. "Good grief! It *is* a three-legged fish!"

"Quite so," Springthorpe said with a chuckle.

"*Benthosaurus*-a kind of ray fin," Tom said, examining the fish with interest. "These aren't legs, Bud-although this fellow does use them to balance on. They're actually extensions of his pelvic fins and tail."

"Aha!" Cyrus Springthorpe rubbed his hands together gleefully. "I can see that you know your deep-sea fishes, Mr. Swift. Have you seen any *Ben-thosaurus* alive?"

"Yes, on several dives. But is that what you came to discuss, sir?"

The attorney became serious. "Have you ever heard of a man named Niklos Marmor?"

"He was the man who endowed the Marmor Marine Laboratory, wasn't he?" Tom asked.

"That's right," Springthorpe replied. "Niklos Marmor came to the United States as a poor immigrant boy. He went to work as a seaman on a fishing trawler. In time he built up a fishing fleet of his own and grew wealthy. Over the years he developed a keen interest in marine biology. Before his death last fall, Mr. Marmor envisioned a new type of aquarium-one for the study and display of deep-sea fishes and other creatures which exist at great depths-specifically including a ray fin. Of course, such an aquarium would present great technical problems."

"It sure would," said Bud. "The aquarium would have to be strong enough to sustain the same tremendous pressure as a submarine a couple of miles down. Isn't that so, Tom?"

The young inventor nodded and said, "Just bringing the specimens up alive to stock the aquarium would be a scientific feat."

"Exactly," said Springthorpe. "But Marmor believed it could be done. In his will, he set up a sizable trust fund to establish and maintain such an aquarium." The attorney named a figure large enough to make both boys gasp.

"The will stated certain conditions," Springthorpe went on. "The money is payable to an American scientific organization *if* it can supply such an aquarium and specimens within a year of Mr. Marmor's death."

"Suppose no one succeeds?" Tom asked.

Then the money is to go to the government of Kranjovia-the country where Marmor was born -for a similar project."

Tom and Bud exchanged startled looks. Kranjovia! A team of their government scientists had tried to thwart the Swifts' South Pole iron-drilling project by force and trickery!

Mr. Springthorpe went on, "Kranjovia worked hard to persuade Marmor that its scientists were more advanced than ours in marine research and even sent a film to prove it. But, unfortunately, he had died before it arrived."

Tom frowned. "Was that the film you sent me?"

"Yes. We suspected it was a fraud-an attempt to snatch a scientific prize to bolster their national prestige. As Mr. Marmor's executors, my firm insisted upon seeing the evidence at firsthand, rather than on film. The Kranjovian government refused, which made us all the more suspicious. Our suspicions were confirmed by several scientific organizations."

Tom looked puzzled. "But I don't understand. How do I fit into this picture?"

Springthorpe's face grew grave. "Several organizations have been working on this project. So far, all have failed. Time is growing very short. Now only two months are left. That's why I've come to you. We're hoping Swift Enterprises will undertake the mission."

Tom's jaw dropped in dismay. "Two months! But that's no time at all, sir, for such a project." He paced about the laboratory. "Right now, Mr. Springthorpe, I'm tied up on another urgent project."

The attorney's face showed his disappointment. "You're our only hope. Niklos Marmor was swayed by sentimental feelings for Kranjovia. But the fact is, the government there is a ruthless dictatorship, unworthy of the bequest. Yet the money will go to them unless you can establish the aquarium in time."

Tom was silent for a few moments. Then he said, "All right, sir-I'll do my best. But I can't make you a definite promise."

Springthorpe beamed and held out his hand. "Your best is more than good enough for us!"

The attorney had just left when the telephone rang. Tom answered it. He was startled as Harlan Ames's voice came tensely over the wire.

"Tom, I'm afraid we have a traitor here at Enterprises!"

CHAPTER X

FACE IN THE SKY

"A TRAITOR!" Tom exclaimed. "Who is he, Harlan?"

"One of those government scientists who came here to use your space prober-Errol Clay."

Tom was stunned by the news. "I can hardly believe that," he said. "Every man had security clearance from Washington. And I've met Clay before, down at Cape Kennedy."

"That's where they found out about him," Ames said dryly.

"At the Cape?"

"Right. A rocket-guidance device was stolen. The FBI has been working on the case for a month. This morning they nabbed the spy who bought it. He was trying to sneak it out of the country and over the Mexican border."

"Do they know his identity?" Tom asked.

"His name's Zofan," Ames replied, "and they; think he's a Kranjovian national."

"You said he was the one who bought the device," Tom cut in. "From whom did he buy it?"

"Errol Clay-at least the FBI is pretty sure it was Clay, from certain evidence they found on Zofan. They don't have absolute proof yet, but Wes Norris just called to tell us to keep Clay under close surveillance."

Norris, an FBI agent, was an old friend of the Swifts.

"Wes will be here in about an hour," Ames said.

"Good night! This could be bad, Harlan," Tom said. "Clay could have seen everything that's going on around here."

All four government scientists had had more or less free run of the experimental station. Since the disappearance of the flying saucer, they had stayed on at the Enterprises observatory hoping to locate the unknown spacecraft.

"Your dad left for that bionics conference just before lunch," Ames said, "so we'll have to handle this ourselves."

"Is Clay at the plant?"

"No, he hasn't shown up yet today. I understand the observers are manning the space prober in rotating shifts. Dr. Beimler is in the observatory right now. Suppose we go and talk to him."

"Check. I'll meet you over there, Harlan."

After telling Bud what had happened, Tom hopped onto a plant jet scooter and sped to the Main Building. Ames arrived and they took the elevator to the dome.

"I have been waiting for Mr. Clay since noon," Dr. Beimler informed them. "He was due to relieve me here at twelve o'clock."

"Twelve o'clock!" Tom echoed, glancing at his watch. "Then he's almost two hours late."

"Yes, that is so," Beimler said. "Not that I mind. It has given me a longer opportunity to use your space prober, Tom. It is a fantastic instrument for astronomical research!"

Beimler explained that each of the government observers in turn had been keeping a four-hour lookout for the flying saucer. Tom and Ames exchanged uneasy looks.

"If Clay was due back at noon, then he must have left the observatory at midnight," Tom said. "Right?"

"Yes," said Dr. Beimler. "He relieved me at eight p.m. last night, then Professor Linski was to take over from midnight to four a.m."

The astronomer became alarmed as he noticed Tom's and Ames's worried faces. "Is anything wrong, gentlemen? Surely Clay is not missing!"

"We don't know yet, but we'd better find out," Ames said grimly. He strode to the telephone and dialed the hotel in Shopton where the four government men were staying.

"Mr. Clay's room doesn't answer," the switchboard operator reported after ringing.

"Give me the desk clerk," Ames barked.

The clerk stated that Clay's room key was in its slot behind the counter, but that he

did not recall having seen the engineer go out.

"Is Professor Linski or Mr. Hafford at the hotel?" Ames asked.

"Yes-I just saw them in the lobby."

"Page the professor for me, please."

Linski soon came on the line. "No, I have not seen Errol Clay at all today," he told Ames. "Hafford and I expected him to join us for breakfast, but he did not appear."

"You saw him at the observatory last night?"

"Yes, he left shortly after midnight when I came to take my turn at the space prober. But why? Nothing is wrong, I hope?"

"So do I," said Ames, "but we can't seem to locate him. You'd better tell the manager to have his room checked."

Ten minutes later the hotel manager called back to report. "Mr. Clay's baggage is in his room, but the maid tells me his bed hadn't been slept in when she came to clean up."

Tom digested the news with a frown. "If Clay never went back to his hotel last night, we'd better make sure he's not still on the grounds somewhere."

"I'll have the gate guard check his log," Ames said. After calling the main gate, the security chief reported, "Well, he's gone, all right. According to the night guard's entry in the log, Clay left the plant at ten minutes to one."

Tom was pacing about worriedly. "If Clay's guilty of stealing that rocket-guidance device at the Cape, it's odd he should scam just as the FBI was closing in," Tom reasoned. "Someone must have tipped him off, Harlan."

"But who?"

Tom picked up the telephone and dialed the switchboard operator. "Can you tell me if any long-distance calls came to the plant last night?"

"Just a moment, please." Soon the operator's voice came back, "Yes, sir. There was a call from Florida at eleven-fifteen for Mr. Errol Clay."

"Well, there's our answer, Harlan," Tom said, after hanging up. "Zofan probably called to warn him they were in danger."

Ames agreed, his expression angry. "Sure, and SClay stayed on for the rest of his four-hour watch in the observatory so he wouldn't arouse any suspicion."

"Hold on a second, Harlan! Didn't you tell us Professor Linski said that Clay left the observatory shortly after midnight?."

"That's right. What about it?"

Tom said, "Yet he didn't leave Enterprises until ten minutes to one. How come it took him so long to get to the main gate?"

Ames scowled thoughtfully. "You have a point there. That would have given him time for some monkey business. I'll check it out."

Meanwhile, Tom hastened to the Swifts' office and beamed open their secret file drawers, one by one, with his electronic key. None of his or his father's plans of their inventions was missing. A search of their separate laboratories likewise disclosed no evidence of theft.

By the time FBI Agent Norris arrived at Enterprises, the young inventor was feeling somewhat reassured. He sat down in the security office for a conference with Ames and Norris.

"Well, I've traced Clay's movements after he left the observatory last night," Ames began. "He went to the space communications lab."

Tom frowned. "What for?"

"He chatted with the night operator there," Ames said, "and asked very casually if any more messages had come through from your space friends. Then he offered to keep watch there while the operator went to the Main Building for some coffee. So he was alone in the lab for fifteen minutes."

"He couldn't do much in that time, could he?" Wes Norris queried.

"He might if he had a camera," Ames said dryly.

"Good grief!" Tom exclaimed. "There's a copy of the circuit diagrams for my space-code brain over there-including the programming instructions!"

At this, Ames snatched up the telephone and called the space communications laboratory. When he hung up a short time later, his face was grim. "The diagrams and programming instructions are gone!"

Norris immediately telephoned an alarm, asking that the FBI and all other law-enforcement agencies put out a dragnet for the missing engineer. Within an hour he reported the results.

"Clay hopped a bus for New York that passed through Shopton at two a.m. He got off at the Port Authority Terminal in New York City. From there on, his trail's a blank."

"Think he'll try to slip out of the country?" Tom asked.

"He may," Norris said. "With help from a foreign consulate, he might even manage to do it. But it won't be easy with the precautions we've set up."

Despite his worries, Tom worked feverishly on his underground burrowing craft in the days that followed. A full-scale mock-up of the design took shape, and systems engineers were assigned to (develop its various parts. Technicians and workmen were put on round-the-clock shifts. For submarine propulsion, Tom adapted the hydrojet which he had invented for his jetmarine. The craft was also equipped with crawl treads like those on diving seacopters.

On Saturday morning, one week after Clay's flight, Bud telephoned from the observatory.

"Get over here pronto, Tom!" he exclaimed. "You'll never believe what I've picked up on the space prober!"

"What is it?" Tom demanded.

"Come over and see it yourself! Man, it's fantastic!"

Tom dashed out to a jeep, and in minutes was striding into the observatory dome. "Okay, I'm here," he said. "What's all the excitement about?"

Bud beckoned him frantically to the megascope space prober. "Take a look!"

Tom stared at the prober screen, then gasped. *A weird face, resembling that of the eerie stone statues on Easter Island, was floating in the sky!*

CHAPTER XI

AERIAL AQUABATS

UNABLE to believe his eyes, Tom continued to gape at the spectacle on the megascope. The weird face seemed to be dancing on the clouds!

"This is crazy, Bud! We must be seeing a mirage!" Tom glanced at the dials of the prober console. "Judging from the range, the face must be scarcely outside the walls of Enterprises!"

Suddenly suspicious, Tom adjusted the image on the scope so as to reduce the close-up and take in more of the sky background. Now he could see a tail of knotted rags dangling below the chin and a taut line stretching downward.

"You goof!" Tom exploded. "That's a kite!"

Bud doubled up with laughter. "Okay, okay, I admit it. Just angle the prober down a hair so you can get a better view of the kite's tail."

Tom did so and saw a white placard fluttering at the end of the knotted rags. It seemed to bear dark lettering. Tom zoomed in for a closer focus and the lettering became visible.

**DEAR PROFESSOR WHIZ-HOW ABOUT ESCAPING FROM YOUR LAB
AND COMING TO A PICNIC ON THE LAKE?**

SANDY & PHYL

Tom chuckled as he read the message and was soon laughing as hard as Bud. "Boy, that's really doing it the hard way! But I guess we have been neglecting the girls."

Sandra Swift was Tom's seventeen-year-old sister. She and her classmate, Phyllis Newton, often double-dated the boys when they could pry them away from their work at Enterprises.

"Where do you get that 'we' stuff?" Bud retorted. "I haven't been neglecting Sandy. You're the guy who's been playing hard to get!"

"Okay, I'll plead guilty," Tom conceded.

"Well, how about it?"

"I sure can't refuse an airborne invitation like that."

"Great!" Bud slapped his pal on the back. "Let's go before you change your mind! And wait'll you see the new water sport I've cooked up for us!"

Before leaving the observatory, Bud flicked on the transmitter of a small walkie-talkie. "Nice going, girls! We've hooked our fish!" he said. "You can reel in the line

now."

"Please! Don't call my date a fish!" Phyl's giggling voice came back.

"Why not? He'll be a flying fish before I'm through with him! We'll meet you and Sandy in five minutes. Over and out."

Tom grinned, slightly mystified. The boys freshened up in the apartment adjoining Tom's laboratory, and slipped on sports coats. Then they hurried to the Enterprises parking lot where Bud had parked his sleek red convertible. A moment later it went roaring out the main gate.

Bud drove past the walled experimental station. On a grassy slope across the highway from the south end of Enterprises sat the two waiting girls. They were wearing light summer dresses and their hair was attractively windblown.

As Bud pulled off onto a shoulder of the road, Sandy, a vivacious blond, called, "What about our Easter Island kite?"

"Too big for the trunk-just leave it there," Bud replied. "I've arranged for a plant pickup truck to call for it."

The girls hurried down the slope to the car. Phyl was dark-haired and had sparkling brown eyes. She was the daughter of "Uncle Ned" Newton, a lifelong friend of Tom Sr.'s who now managed the Swift Construction Company in Shopton.

"I can hardly believe we were able to lure you away, professor!" she told Tom happily.

The red convertible sped off along the highway. Bud turned onto a road that led to Lake Carlopa. When they arrived at the beach, they found the sand dotted with gay umbrellas and sunbathers.

Bud parked in the public lot and opened the car trunk to get out their swimsuits. Tom couldn't resist lifting the cover of the picnic hamper to peer at the tempting lunch.

"Hands off!" Sandy chided, slapping his wrist playfully. "It's not time to feed the lions yet. First we swim and work up an appetite."

"Mine's already worked up," Tom protested. "That cold chicken looks great."

Sandy giggled. "I'll bet you will work up an even bigger one when you try out Bud's two surprises!"

"Two surprises?" Tom shot a questioning glance at Bud.

"All in good time, my boy," said Bud. "Let's go change first."

When the boys emerged from the bathhouse in their swim trunks, Bud led the way toward a nearby boathouse. Inside, he proudly pointed out a sleek, fiberglass-hulled speedboat with a wraparound windshield and blue-upholstered bucket seats in the cockpit.

"How do you like it?"

"You mean it's yours?" Tom asked in admiring surprise.

"You bet! I've named it the *Blue-eyed Blitz*!"

"After guess who?" Tom said with a chuckle, thinking of Sandy's blue eyes. "Boy, this is terrific, Bud!"

He started to climb down into the boat, but Bud gripped his arm. "Hold it, pal. You haven't noticed my second surprise yet."

Tom's eyebrows shot up as Bud pointed to a huge, kitelike object lying on its side against the wall of the boathouse. It had red-and-white-striped canvas and a projecting framework of metal tubing.

"Wow!" Tom exclaimed. "A water kite!"

Bud grinned excitedly. "I brought it from Florida. Tom, it's the nearest thing to flying like a bird you've ever tried!"

The boys maneuvered out of the boathouse, Tom at the wheel of the *Blitz* while Bud balanced the kite on the gunwale. They put-putted toward the bathing beach, where the two girls were waiting for them, and anchored in shallow water. Then they waded ashore. Tom carried the towline and a pair of water skis which Bud had stowed in the boat.

Sandy and Phyl greeted them eagerly. Bud said to them, "Hold the kite for me, will you, please?"

While they did, he strapped the safety harness around his right thigh and turned to Tom. "I'll do my flying trapeze bit first and then you take a turn."

"Now I see why Sandy advised me not to eat yet," Tom said wryly.

"This shouldn't faze you after all the acrobatics you've done in outer space!" Sandy said with a laugh.

Bud nodded as he slipped his feet into the water skis. "Sure, there's nothing to it."

"He's only been practicing all week!" Phyl retorted.

Grinning, Bud attached the towing cable securely to the kite harness. Tom and the girls swam out to the speedboat and made the line fast to a cleat at the stern. Bud waded into the water on his skis, then poised the kite above his head, gripping it by the crossbar.

"Okay, let 'er rip!" he shouted.

The *Blue-eyed Blitz* got under way gently, pulling the line taut. Then Tom gunned the engine and Bud whizzed forward until his skis were skimming the waves, amid a torrent of spray.

As the *Blitz* picked up speed, Bud went soaring aloft! Higher and higher he rose. The kite bellied stiffly overhead as he hung by his arms. Excited shouts went up from swimmers and the onlookers along the beach.

"Oh, I wonder what it's like up there," Phyl murmured breathlessly.

Tom glanced over his shoulder. "Like taking off on a ski jump and not coming down!"

The boat circled around the lake, then headed back toward the beach. As Tom cut speed, Bud gradually descended and was soon planing over the water again.

"Boy, that was great!" he shouted when the ride came to an end. "Your turn next, Tom!"

The young inventor waded ashore and listened to last-minute instructions as Bud helped him attach the safety harness. Then Tom put on the skis and gripped the kite. Bud swam back to the boat and took the wheel.

As the craft started off, Tom could feel the lift of the kite almost at once. The wind stream beat against his face. Suddenly he was arcing upward, above the waves! Tom grinned with exultation.

"So this is how a bird feels!" he thought. Soon the boat was far below him. He was flying through the air! "Boy, if my arms could stand it, I'd like to do this all day!"

There was a sudden loud report, like a rifleshoot. A length of cable came lashing back toward Tom's face!

The towline had snapped!

Panic seized Tom. Already he could feel the kite losing lift. He fought to keep cool. Perhaps he could glide down to a gentle landing on the water. Although Tom could tilt the kite from side to side, there was no way to control its vertical axis. The crossbar merely rotated in his hands as he plunged downward.

"It's hopeless!" Tom thought. "If I hit the water with the kite, I'll break some bones for sure!"

He kicked off his skis, then unsnapped the safety release of his harness. A second later he was plummeting toward the lake!

Aboard the boat, Sandy and Phyl stared in helpless horror. Shrieks went up from the crowd on shore as Tom slammed into the water with a tremendous splash. The kite sailed on past, falling at a slower rate.

Bud, white-faced with fear for his friend's safety, steered the boat in a wide arc in order to circle back to Tom's assistance.

"I can't see him!" Phyl wailed. "He must be hurt!"

"There he is!" Sandy exclaimed.

Tom's head had reappeared. He was splashing feebly in an effort to stay afloat. It was evident that he was in trouble.

"Take the wheel, Sandy!" Bud cried out. He launched himself over the side. A few swift strokes brought him close to Tom.

"Steady, pal! I'm right here!"

Tom's eyes were glazed. Gasping and coughing water, he made no resistance as Bud grasped him under the chin and began swimming back to the *Blitz*. The girls helped to pull Tom into the boat. By now Tom's eyes were closed and his body limp.

"He must have been pretty badly stunned from the fall," Bud told them, clambering aboard. "He sure hit the water hard."

Sandy gunned the boat toward the beach. A lifeguard met them and helped to lift

Tom ashore while a swarm of bathers and onlookers gathered. "I've phoned for an ambulance!" a man shouted.

Tom was placed gently on the sand. Sandy and Phyl watched anxiously as the lifeguard checked his condition.

"His pulse and breathing seem to be okay," the guard reported. "We'd better cover him with a blanket till a doctor gets here."

"Oh, Bud, do you think he'll be all-?" Phyl started to ask.

Bud did not answer. Instead, he darted away through the crowd, before either girl could stop him!

CHAPTER XII

A SUSPICIOUS STRANGER

"BUD! Where are you going?" Phyl called. The two girls stared after him in astonishment, but the husky youth was soon lost from view among the throng of onlookers.

"Why do you suppose he ran off at a time like this?" Phyl asked Sandy uneasily.

"I can't imagine," Tom's sister answered. There was a tearful catch in her voice.

The girls watched Tom hopefully for signs of returning consciousness, but he did not move.

Soon the wail of a siren could be heard in the distance, and an ambulance came shrieking to a stop on the beach road. A white-uniformed intern jumped out, while two attendants hastily unloaded a stretcher. As Sandy and Phyl told about the accident, the young doctor opened his bag and began examining Tom carefully.

"No broken bones, as far as I can tell. But he may have suffered other injuries." The intern stood up and spoke to the two attendants. "Okay, fellows-get him into the ambulance."

As Tom was being lifted onto the stretcher, Bud ran up.

"Where have you been?" Sandy asked.

"I'll explain later. What about Tom?"

"The doctor can't tell yet."

Bud watched anxiously as his pal was placed in the ambulance, then told Sandy and Phyl, "Change your clothes and we'll drive to the hospital."

Sandy telephoned her parents before leaving the beach. Meanwhile, Bud had returned the *Blitz* and the kite to the boathouse. As they sped off in his red convertible, Phyl said, "You still haven't told us where you went."

"I was chasing a fellow-but I couldn't catch him."

Sandy gave Bud a questioning look. "What fellow?"

"Maybe you didn't notice," Bud said, "but the end of the towline got washed up on the sand after we beached the boat. I saw this guy pick it up and give it a real close inspection."

"There's nothing odd about that, is there?" Phyl asked, puzzled.

"There might be, if that break in the towline was no accident."

Both girls were startled, and Sandy said, "What do you mean, Bud?"

He shrugged uneasily. "If that man tampered with the rope, he might have been checking to make sure there was no evidence left. Besides, his face looked familiar. Then I remembered where I'd seen him before."

"Where?" Phyl asked.

"On the beach, yesterday afternoon, when we were talking about getting Tom to try the kite. I've seen him somewhere before, but I can't recall where. Anyhow, when I went after him, he scrambled-on the double!"

Soon after Bud and the girls reached Shopton Hospital, Mr. and Mrs. Swift arrived. Tom had revived and was given a complete checkup, including X rays. Except for severe bruises from hitting the water, he had suffered no injury. However, the medic in charge prescribed bed rest over the weekend.

Sunday afternoon, Sandy, Phyl, and Bud came to visit the young inventor. They found him propped up with pillows, busy with pencil and paper. Sketches and computations were strewn about the bed.

"Now see here, brother dear," Sandy said. "I thought you were supposed to be

resting!"

Tom grinned, like a small boy caught with his hand in the cookie jar. "Well, I am resting-from my work designing the mole machine."

"What's on the drawing board now, professor?" Bud asked.

"That deep-sea aquarium for Springthorpe."

Bud and the girls gathered around curiously as Tom explained his invention. It consisted of an enormous cylindrical steel tank with a narrower glass cylinder inside. A short flight of steps was mounted at each end.

"The visitors will walk through the glass cylinder," Tom said, "which will provide an all-around window for viewing the fish.

"The water for the tank," he added, "will be contained in the space between the walls of the two cylinders, with separate compartments for fish from different depths. Maximum pressure will be 800 atmospheres or about 12,000 pounds per square inch."

"Oh, how thrilling!" Phyl exclaimed. "It'll be like sightseeing on the ocean bottom."

Tom nodded. "We may have to use dark-blue lights if the fishes' natural lighting isn't enough to penetrate the deep-ocean darkness that we'll have in the tank."

"Can you make a glass cylinder capable of withstanding all that pressure?" Bud asked.

"I think my new glass formula will do the trick, but I'll have to check my computations in the lab. Of course, the circulating pump and filter and oxygen injection systems will complicate things a bit." Tom suddenly noticed a large wicker hamper which Bud had carried into the room. "What's in there-your weekly wash?"

"Are you kidding?" said Bud. "It's that picnic lunch you missed out on yesterday 1"

Sandy opened the hamper, which held a tempting array of sandwiches, cold chicken, pickles, hard-boiled eggs, and chocolate cake.

Tom smacked his lips hungrily. "Just what I was hoping! Clear these papers away, Bud, and let's get busy!"

The girls giggled and proceeded to set out the picnic feast. While the four were eating, Sandy said, "Tom, Dad asked me to tell you he has been working on the

translation of that sacred stone you brought from Easter Island."

"Any progress?" Tom asked.

"Yes. He says the space symbols do provide a key. From what he has deciphered, the stone tells of a continent that sank under the ocean. Dad thinks it may have been the continent of Lemuria."

"Lemuria?" Bud echoed with a puzzled frown.

"It's a legendary continent," Tom explained, "sort of like Atlantis. The translation of that sacred stone could be the first solid evidence that Lemuria existed."

The group discussed the intriguing, age-old mystery over dessert. Then Bud mentioned his suspicion about the kite towline mishap.

"You could be right that it was no accident," Tom said. "I've been thinking the same thing."

"But how was it done?" Bud said, scowling. "First I thought the rope might have been doctored with some chemical that ate through the strands. But the whole thing was timed so neatly-just as you became airborne."

"Hmm. That was about a three-eighth-inch line, wasn't it?" Tom asked.

"Right. Three-eighths polyethylene."

"Okay. Suppose this fellow you saw got into the boathouse Friday night," Tom reasoned. "He could have hollowed out a small space inside the other strands of the cable-just big enough for a tiny radio receiver hooked to an explosive capsule. It'd be a tight squeeze, but it could be done with microcircuitry components."

Bud's eyes widened. "I get it! He stands by on the beach with a transmitter in his pocket-and the minute you're up in the air, he beeps a signal to blow the capsule!"

Sandy and Phyl were horrified. Phyl asked, "Have you thought any more about why the man's face looked so familiar?"

"I sure have. Tom, I'm positive I've seen that guy hanging around a restaurant in Fernwood where our Fearing Island crewmen often eat. That's probably why I noticed his face on the beach."

"Have you told Ames?" Tom inquired.

"Yes, and he's going all-out to trace him."

Tom gave a startled gasp. "Bud, that might tie in with the hijacking of the *Angler!* The man may have been hanging around to pick up information on its next cruise."

Sandy, who was repacking the picnic basket, looked at the two boys inquiringly. "Does that give you any clue about who he might be?"

"Hanged if I know," said Bud. "A guy steals the plans of your latest jetmarine, and then tries to get you out of the way, Tom-does that suggest anything?"

"At a guess, I'd say he might be a Kranjovian agent," Tom speculated, "and the whole deal could be connected with Marmor's legacy."

"How so?"

"Simple. First, they need the technical know-how for an undersea craft that can go deep enough to get the aquarium specimens. Second, Marmor's lawyer offers me a chance at a big sum of money to accomplish this job. So the Kranjovians have to get rid of me to be sure that the honor will go to their country."

"Sufferin' seals! That adds up!" Bud exclaimed. "I'll tell Ames."

Next morning, when Tom returned to the experimental station, he went over his aquarium plans with Arvid Hanson. "Get this into work right away, will you, Arv?"

Hanson gave a low whistle. "Boy, these high-pressure connections will be a major job. I'll get busy on it pronto, skipper."

Tom plunged back to work on his underground burrowing craft. During the days that followed, the wooden mock-up was gradually translated into a full-scale operational model of tremendously strong, heat-resistant titanium-steel alloy. This was insulated with layers of asbestalon and the amazing plastic, Tomasite, which the young inventor used on both his space and undersea craft.

"We'll need every inch of that insulation if this ever burrows down close to the earth's mantle," Tom told Bud as they inspected the finished machine. "The temperature increases about one degree Fahrenheit every hundred feet."

"Have you named this job yet?" Bud asked.

"Yes, I'm calling it a Geotron-from the Greek word *ge*, meaning 'earth,' as in 'geology.' This model will be the Mark I."

Bud grinned. "It's still a mole-mobile to me." He noticed a narrow seam around the mid-section of the needle-nosed craft. "What's this for?"

"The Geotron actually has two separate cabins, fore and aft, that slide together like sleeves over a short central cylinder," Tom explained. "In case of trouble at either end, the other cabin can rise to the surface alone."

"Like a worm cut in half, eh?"

"Right. There are two power-plant units and two complete sets of controls-one for each cabin. And you'll notice the tractor treads for ground-crawling are in two sections, also."

Early the following morning the Geotron was loaded aboard a huge trailer, then covered with tarpaulin and trucked eastward to the Atlantic coast with Hank Sterling, Enterprises' blond, brawny chief engineer and trouble-shooter, in charge. Tom and Bud went by car.

A strip of barren beach had been chosen as the take-off point for the craft's first test. When they all reached it, the truck was backed across the sand near the water. The two boys climbed aboard the trailer and its ramp was let down. As Tom pressed a concealed switch, the two sections of the Geo-tron's hull moved slowly apart.

"Good luck, fellows!" called Hank.

"Thanks." Tom waved to the truck crew, and Bud cried out, "Keep your fingers crossed for us!"

After entering a hatch in the central cylinder, the boys went through a pressure-tight doorway into the forward compartment which faced the water. Here, amid banks of mechanical and electronic equipment, they sat down at the controls and looked out the narrow cabin view pane.

Tom's heart was pounding as he excitedly glanced at Bud. "All set?"

"All set, skipper. Let's go!"

CHAPTER XIII

MOLE TEST

THE Geotron hummed with tremendous power as Tom started its atomic reactor. Then he threw a lever that set the crawl treads in motion.

The huge vehicle rumbled slowly across the remaining beach and inched its way into the surf. When the water reached the level of the cabin window, Tom retracted the treads into the hull, leaving the craft afloat in the waves.

"So the mole has positive buoyancy, eh?" Bud remarked.

"Just barely. Its buoyancy is almost neutral," Tom explained. "I'm relying on our downward repelatrns for the main push, if we have to get off the bottom and back up to the surface in a hurry."

As he spoke, Tom moved another lever, causing bow planes to knife out from the hull. The flip of a valve shot superheated steam to the turbine. It spun into action, pumping a powerful blast of water through the drive jet to propel the craft. Tom grinned with satisfaction as the Geotron. slipped smoothly seaward.

Bud gave a whistle. "Fifteen knots-not bad!"

"She can go a lot faster at full power, but I'm not trying for speed on this run."

Once the boys were well offshore, Tom began to take soundings with the fathometer. Gradually the readings increased to one hundred feet.

"This is far enough," the young inventor said. "Let's take her down."

His hands moved swiftly over the control board, flicking servomotor switches to open the ballast tanks. As they flooded with seawater, he depressed the diving planes and angled the steering jets upward. The Geotron plunged toward the bottom.

Bud was too busy studying the operation of the controls to watch the play of sea life as they sank through the greenish depths. Presently they settled to the ocean floor, amid a profusion of underwater vegetation, mollusks, sea anemones, and sponges.

"Now for the real test." Tom retracted the bow planes and gave Bud a tense smile. "Ready to make like a mud puppy, pal?"

"As ready as I'll ever be. But first check me out on these repelatron controls."

"They're actually worked by computer, so the job of piloting is fairly simple," Tom explained. "Altogether, there are sixty-four separate repela-tron radiators spaced around the hull. For a steady course, just set the compass heading and the angle of elevation or depression on these dials. The computer takes over from there and activates the proper repelatrns. Or, if you flip this toggle switch to 'manual,' you can steer directly through the control wheel."

"Sounds like a breeze!" Bud declared. "That all there is to it?"

"That's all. Just for a start, let's burrow down at a 60-degree angle, dead ahead. Got your seat belt buckled?"

"Right, skipper."

"Okay, here we go!" Tom set the dials and turned on power to the repelatrons.

Slowly the Geotron's stern tilted aloft as repela-tron beams pushed against the seabed and inclined the craft to the proper angle. The boys' bucket seats, gimbal-mounted, rotated to remain level. As Tom increased power, the craft nosed downward into the sediment.

Like a huge sea worm, the Geotron nuzzled its way through the ooze. Bud sucked in his breath nervously as the cabin window became covered over. Tom flicked on the compartment lights before the last glimmerings of sun were shut out.

"Man, it's eerie down here," Bud muttered in a hollow voice. "We're *really* going where no human has ever been before!"

"Yes, Bud, but a geologist could read centuries of ocean history just from what we're seeing." Tom pointed to the layers of calcified marine organisms, shells, and other deposits moving past their window.

A thin film of highly translucent oil was circulating over the pane to prevent abrasion of the quartz glass, but this did not interfere with visibility. From time to time, interesting fossil forms could be made out clearly.

"What's our speed now, Tom?"

"About three knots."

The craft slowed as it penetrated into denser, harder strata of the undersea muck. Tom switched to "manual" to try steering by hand. Several minutes later the Geotron began to roll unsteadily from side to side.

"Whoa! Take it easy, skipper!" Bud said. "Are you trying to make me seasick?"

"I'm turning a bit green myself," Tom retorted. "Looks as though this baby will have to be gyro-stabilized."

By adjusting the power and keeping a defter touch on the control wheel, Tom finally

managed to hold the Geotron at a stable angle. When they were eighty feet below the sea floor, he leveled off and slowly veered back toward the coast. An hour later he glanced at the dials of their inertial navigator.

"Want to come up for air, fly-boy?"

Bud nodded and gave a slightly forced grin. "Guess I wouldn't mind. It's great playing down here among the worms, but I'm feeling a mite claustrophobic. Are we still at sea?"

"Yes, but pretty close to shore." Tom pulled back on the control wheel and sent the Geotron angling upward.

After a lengthy climb, he began leveling off again. The boys saw the material outside the view pane change gradually from sea muck to sand. Suddenly a dazzling glare of sunlight struck their eyes.

"We're back on the beach!" Bud exclaimed.

"With an audience!" Tom halted the Geotron.

Straight ahead, on a wooded slope overlooking the sand, were several people. They were kneeling or crouching in the brush, and all of them carried binoculars.

"I'll bet they're bird watchers," Tom said.

One, an elderly woman, pointed at the Geotron and began gesticulating wildly. The others gaped and trained their glasses on the craft.

Bud chuckled. "We've really given them one for the record book! A giant, glass-eyed, iron-billed sandpiper!"

A man in the group picked up a stout stick and brandished it fiercely. Another began breaking off a thick tree branch. The women retreated, screaming.

"Good grief, they must be getting ready to attack us!" Tom said. "We'd better duck out through the cellar!"

Shaking with laughter, Tom threw the Geotron into reverse, and the huge needle-nosed machine withdrew into the ground.

When it was safe below the surface, Bud said, "What now, mole boy?"

Tom spread out a topographical map of the area. "Hmm. I'd like to test my invention in rocky soil before we try burrowing too deep under the sea floor," he said. "This is forested parkland around here. Suppose we head straight below it toward that hill."

Bud nodded agreement and Tom set the Geotron in motion. The craft wedged its way steadily along, twenty feet below the surface. After about a mile and a half, they neared the hill.

"Going to stay on this course all the way under the hill?"

Tom shook his head. "We'd better not get too deep here, either, until we're sure how she performs in rock. I wouldn't want the whole hill on top of us if anything should go wrong."

Tom pulled back on the wheel, inclining the nose of the Geotron upward to follow the slope of the hillside. Their speed became slower. "Plenty rocky, all right," Bud murmured as he watched the material crunching past their pane.

"We're getting into granite." Tom cautiously increased power to the repelatrns, and the craft moved ahead somewhat faster.

Suddenly they heard a dull rumbling sound. Jarring vibrations shook the Geotron, and rocks began to slip quickly past the view window.

"What's happening?" Bud asked nervously. "Is somebody dynamiting around here?"

"Worse than that," Tom said. "It's an underground rockslide!"

He had scarcely finished speaking when the Geotron ground to a stop. Tom gunned the repelatrns to full power. There was an eerie metallic creaking as the huge machine strained to push back the enormous weight of rock all around it. But the Geotron did not move.

Bud turned a frightened face to his companion. "Tom, we're trapped underground!" he gasped.

CHAPTER XIV

SUBTERRANEAN SHRIEKS

"YES, we're trapped," Tom admitted grimly. "But I think I can get us out."

"How?" Bud asked tensely.

"We can start by calling for help."

"Are you kidding, Tom? How can we beam a radio signal through all this rock?"

The young inventor did not answer. He unstrapped his seat belt and groped along the tilted deck to the rear of the compartment. He took a wrench and unscrewed a two-inch plug in the upper hull. Next, he partly uncoiled a thick plastic hose, with a metal cylinder about a foot long sticking from one end. The cylinder was tipped with a high-speed drill bit and had tiny, toothed wheels which protruded along its length.

"You going to drill up to the surface with that?" Bud asked, fascinated.

"Yes, there's a motor in the cylinder to rotate the drill, and these little wheels will drive it upward. There's a small gyro, too, to keep it aimed in a constant direction."

Tom connected an electrical cable from the other end of the hose to a socket in a control box, and switched on power. He inserted the drill bit through the hole and held it against the rock until the bit "spudded in." As it drilled upward, the wheels took hold.

"Where's the rock dust going?" Bud asked.

"Down through the hose." Tom turned the control switch to full power and the boys anxiously watched the hose snake upward. Occasionally Tom slowed the motor to cool the cutter. He explained that the hose was double-walled, with a pump for circulating lubricant to the bit. Suddenly the needle of the rpm indicator on the control box swung sharply upward.

"We're through!" Tom switched the motor to reverse, and the hose gradually came back down.

Bud grinned in relief. "Now what?"

"Now we run up an antenna." Tom began unreeling copper wire and feeding it up the shaft. When he was sure the upper end of the wire was protruding aboveground, he attached the free end to the antenna outlet of their radio.

"Okay, Bud. Start SOS-ing!"

In moments Hank Sterling's voice responded. "Truck to Geotron. Where are you fellows?"

"We're stuck about twenty-five feet under a hillside, so bring an earth blaster pronto!" Bud read their precise latitude and longitude off the navigator dials and added,

"Just look for a copper wire sticking out of the ground!"

"Man, you two sure get yourselves into some great fixes!" Hank said. "Okay, stand by."

The boys made themselves comfortable and ate boxed lunches which Chow had packed. Presently Hank and the truck crew radioed that they had located the wire antenna. Soon afterward, a jet cargo plane from Enterprises reached the scene. While the crew unloaded an atomic earth blaster, Tom gave orders for the rescue operation.

"Start drilling well below us on the hillside and work upward. Don't let the blaster come any closer than ten feet or it'll turn the Geotron hotter than a boiler with radioactivity."

"Think that'll ease the pressure enough for you to break loose?" Hank asked.

"Fairly sure. Let's try it, anyhow."

Minutes later, Hank signaled that the tunnel had been drilled, and the blaster withdrawn. The boys went aft to the stern compartment. Tom set the controls for reverse and fed power to the repelatrions. The whole hillside seemed to strain and heave around them.

"We're moving!" Bud cried out.

The huge electronic mole plowed through the barrier of rock until it broke clear. Then it glided on through the tunnel to daylight.

Hank and the rescue crew cheered as the boys stepped out of the Geotron. Tom and Bud grinned sheepishly, their voices quavering slightly as they expressed their thanks.

"By the way, skipper, I told Billing not to say anything to your dad when I radioed for the earth blaster," Hank informed Tom privately.

"Good! You saved him a lot of worry, Hank."

Dinner at the Swifts' home that night included Bud and Phyl. While the four young people were watching TV, a startling newscast came on.

"Defense officials were startled this morning," the announcer began, "by a wild report of underground invaders at Sandmoor Beach."

Tom and Bud exchanged grins as the newscaster went on:

"The report came from a group of bird watchers who stated that a monstrous steel device with two creatures aboard suddenly poked its nose above the sand, then withdrew from sight. Police and an armed squad of Coast Guardsmen investigated, but could find no evidence to support the story. Meanwhile, three of the women bird watchers were treated for nervous shock."

The boys broke into howls of laughter.

"What's so funny?" Phyl asked.

"Probably a couple of mechanized gnomes- wouldn't you say, Tom?" Bud queried.

Suddenly Sandy's eyes twinkled. "Phyl, we're looking at those two gnomes!" Tom nodded.

At lunchtime the next day Bud found Tom in his laboratory, surrounded by a fresh pile of sketches and computations. A new model lay on the workbench in front of him.

"What's this, Tom?"

"A new Geotron. I decided the one we tested wasn't good enough to risk our necks at the bottom of the Pacific."

The revised design was more boat-shaped and almost flat on top. "That's to keep us from rolling the way we did in Geotron I. And the repelatrions will have twice as much power-enough to force a way through the hardest rock."

"You mean you won't trap me again?" Bud asked with a grin.

The following week Arv Hanson reported to Tom that the deep-sea aquarium was gradually taking shape. "Forming the glass cylinder was a tough job," he added, "but it came out perfectly. I'm sure you'll carry through the project okay."

Tom grinned. "Don't bet on that, Arv. Time's running out and a hitch anywhere along the line could kill our chances."

With work well under way on the Geotron, Tom took time out to design two pressurized tanks for bringing the aquarium specimens to the surface. One was to be collapsible so that it could be stored inside the seacopter. "That'll be our spare," Tom told Arv Hanson.

By the time these were nearing completion, Geotron II was ready for a tryout.

Bud stared with awe as the powerful craft was hoisted dripping out of a test tank, sunk in bedrock on the grounds of Enterprises. Its hull was dimpled with the round, dish-shaped reflectors of the repelatron radiators.

"So this is what we'll go burrowing into the Pacific sea floor with, eh?"

"I hope so, if it stands up to a hard-rock test," Tom replied. "We've just subjected it to one-and-a-half times the pressure it would encounter at the bottom of the Mariana Trench, almost seven miles down. No sign of a leak."

He added that this model was also constructed with separate fore and aft compartments. Powerful jackscrews had been added for opening the two cabins manually in case of emergency. "We'll fly the Geotron out to the Dakota badlands tomorrow to try it in real rock country, Bud."

Next morning the *Sky Queen*, Tom's mammoth, three-decker Flying Lab, and its crew took off from Enterprises and zoomed westward. It settled down shortly before noon, amid the eroded gullies and buttes of the South Dakota Badlands.

"Wish we'd got here earlier in the season," Chow remarked. "We might've flown up to Belle Fourche fer the Black Hills Roundup."

"Pardner," Bud said, "bronc-bustin' ain't nothin' compared to underground rock bustin'!"

The plane crew, led by Hank Sterling, unloaded the Geotron, and after a hearty lunch the two boys boarded the subterranean craft. Tom took the controls and tilted it into nose-down position for take-off. Soon the Geotron was boring underground with a steady thrum of power.

They proceeded smoothly through layers of clay, shale, and sandstone. Soon the going became slower. Tom stepped up power.

"We hitting solid granite now?" Bud asked.

Tom nodded tersely. Both boys held their breath as the Geotron became wedged fast, but a sharp burst on the repelatrons quickly opened up a path. The two geonauts settled back in their bucket seats with increasing confidence.

During the next two hours the boys penetrated several thousand feet into bedrock. Thrilled with the Geotron's performance, Tom finally headed back toward the surface.

"Bud, do you realize we've made scientific history today?" he said. "It's not just a

case of going where no human has been before, but I doubt if any living creature has ever-

His words were blotted out by a sharp report. The boys gasped as their craft was hurled upward like a cork popping from a bottle!

Clang! The upper hull crashed against rock. Then came a sickening plunge that ended in a bone-jarring thud.

The boys lolled in their seats for a moment, shaken and stunned, trying to collect their wits. Then Bud murmured, "Wh-what happened?"

"I don't know," Tom said. He switched on the Geotron's undersea beam.

Bud exclaimed in awe as the light revealed a large subterranean cavern. "We must have hit the roof of this place!" he said. "But it's twenty feet overhead! Tom, this crate can't fly, can it?"

"No, Bud, but the answer will sound even stranger. Believe it or not, we fell *upward*."

"Fell upward! Are you kidding?"

Tom shook his head. "No, on the level. I've heard about this happening in deep South African mines-rock falling upward, that is. You see, under the tremendous pressure encountered at great depths, rock is slightly elastic. It has a bit of 'give.' When a tunnel or shaft is dug, some of the overlying pressure is partly released, and loose rock may be squeezed upward. Miners have been killed or hurt in this way."

"How does that explain our accident?" Bud asked, still puzzled.

"When we broke through the floor of this cavern," Tom explained, "the pressure on top of us suddenly dwindled to zero-so the pressure underneath spewed us up like rock out of a volcano. We crashed against the roof and fell back again."

Bud shook his head. "Man, this is really topsy-turvy-ville down here. Let's get out before any more crazy accidents happen!"

But when Tom tried to start the repelatrions, there was no response.

"The repelatron generators are dead," he announced grimly. "The crash must have knocked them out of commission."

A hasty check of the equipment confirmed Tom's fears. "We can't possibly repair it, Bud."

More damage came to light when the boys tried to climb out and explore the cavern. The two halves of the hull refused to budge.

"Our hydraulic system is out, too," Tom said. "We'll have to use the jackscrews."

With strenuous tugging on the jackscrew handles, the two compartments slowly slid apart. The boys opened the hatch and emerged from the Geotron, both carrying powerful flashlights.

"Boy, what a place to be entombed!" Bud muttered. His voice echoed eerily.

"There's always a chance this cave system may extend up to the surface," said Tom. "Let's look around."

The cavern was about a hundred feet long. At one end the floor sloped upward and the walls converged into a narrow "chimney."

"Bud, I can feel a draft of air!" Tom said.

"Same here. But that chimney's too steep to climb without mountaineering gear. Do you think radio signals might carry up to the surface?"

Tom replied thoughtfully, "No, but a loudspeaker might-if we made one powerful enough."

They returned to the Geotron. Tom opened the electronics spare-parts locker and began constructing an ultra-high-powered, audio-amplifier system. He ran a cable from the craft and placed the speaker at the opening of the vertical fissure. Then he and Bud went back to the mole.

"Better plug your ears," Tom warned. "This setup packs enough decibels to fracture your skull! The output won't be connected to just a loudspeaker-it'll be to a *loudshrieker*."

The whole cavern rang and echoed as the boys began issuing calls for help over the microphone. Gradually their voices became hoarse from the effort. They settled down to wait. Hours dragged by. The young geonauts' hopes began to fade as no answering signal came to indicate that their cries for help had been heard.

"I guess our PA system just isn't powerful enough," Tom conceded. He scowled,

racking his brain for some answer to their plight. "Bud, I have another idea. It's pretty far out, but it looks like our only hope."

CHAPTER XV

TERRASPHERE RESCUE

AS the afternoon wore on, the crew of the *Sky Queen* grew increasingly worried. Hank flew over the Badlands area, hoping that the metal detector or Damonscope might give some clue to the boys' location. But their efforts were futile.

"The Geotron must be too deep," Hank said.

"Brand my pickax, we can't jest leave them two buckaroos down there!" Chow protested. "Ain't there somethin' we can do?"

Hank Sterling gave a helpless shrug. "We can't even dig unless we know where to aim. Maybe they've had some kind of technical trouble and Tom's repairing it. All we can do right now is wait-and hope."

A brilliant Western sunset turned the sky crimson. Gradually darkness settled over the Badlands. Too anxious to retire to their regular bunks aboard the Flying Lab, the crew lay down on blankets outdoors to snatch a few hours of uneasy rest.

Chow dozed off. He began to snore, but suddenly stirred and sat bolt upright. What had awakened him? He peered around through the darkness, but could see no one moving about the camp.

"Must've been havin' a bad dream," the cook decided. "No wonder, with Tom an' Bud lost!"

Chow settled back and closed his eyes. The next instant he jumped as if he had been stung. The ground seemed to be giving off noises 1

"What in tarnation's goin' on?" Chow muttered. "Am I hearin' things?"

He put his ear close to the ground. There it was again! The earth seemed to be humming and buzzing-like a track rail vibrating to the sound of an approaching train. But the humming noise was intermittent, coming in short off-and-on bursts.

"Sort o' like a telegraph key givin' code signals," Chow thought.

Code!

"Great hoppin' horned toads! It *is* code!" the cook realized as the noises began again.

Dididit-dahdahdah-dididit-

"SOS!" Chow translated. "Brand my nightshirt, that must be Tom an' Bud signalin' fer help from underground!"

Dah-ditdah dit-ditdah-ditdah dah dit- ditdah dah dit-dit-dah ditdit-ditdit-dah dit-dah dit dah dit-ditdah-ditditdit dah- dit . . .

"Thunderation! Why can't I ever remember nothin' more o' that code!"

Chow leaped to his feet, then waddled at top speed among the sleeping figures of the crewmen, bellowing at the top of his lungs. "Hank! Mike! Bob! Wake up, everyone! Roll out o' them blankets! I jest heard from the boys!"

Hank Sterling was wide awake at once. "What did you say?"

"I jest picked up an SOS from Tom an' Bud! It came out o' the ground!"

Hank leaped to his feet. "Where did you hear this?"

"Over there where I was sleepin'. You kin prob'ly hear it right here, too! Put your ear down close to the ground!"

By this time all the crewmen were awake. They watched as Hank knelt and listened.

"You're right, Chow-it is an SOS!" he reported breathlessly. "Wait a second! Hold it! *T-r-a-p-p-e-d i-n c-a-v-e!*"

Hank sprang up again. "We'll signal back at once!" he told the others.

Barking orders, he ran toward the *Sky Queen*, which was equipped to carry out scientific research in any corner of the globe. Its laboratory and workshop compartments were stocked with every conceivable variety of tools and equipment.

The crew, under the flight engineer's direction, hastily constructed a makeshift drill rig and sank a length of pipe deep into the ground. Hank, meanwhile, assembled a powerful sound generator, using an air-horn type of transducer driven by a compressor. He aimed the horn into the pipe and began blasting out signals in code: *Queen to Tom. Do you read us?*

"Think that'll carry way down to where they are?" Chow asked anxiously.

"We'll soon find out!" Hank flopped to his knees and pressed one ear to the ground. Presently his face brightened in the glow of the floodlights which had been set up to illuminate the operation. A signal was coming back!

We read you faintly.

In a few minutes Hank had learned the details of the boys' plight and the precise location of the cavern in which they were trapped.

Tom added in code: *Vertical fissure or chimney may not lead straight upward from cavern.*

Hank replied: *We will find ground opening. Switch to voice and keep talking.*

Hank turned to his men. "Open the hangar compartment and wheel out the *Skeeter*!" This was a midget helicopter carried aboard the *Sky Queen*.

As the crewmen hurried to obey, Hank told the radioman, "Call Shopton! Tell them to fly an earth blaster and the Terrasphere out here fast!"

Soon the helicopter was warmed up. Hank took off with Chow, heading for a spot directly above the cavern. He landed and set up an ultrasensitive shotgun microphone, hooked to a powerful amplifier and loudspeaker.

Hank began turning the shotgun mike slowly in a circle. He froze as Bud's voice was suddenly picked up over the speaker, crooning, "*Oh, bury me not, on the lone prairie!*"

"That's Buddy boy, all right!" Chow cried out. The cook's leathery face creased into a smile. "Sounds like a sick bull calf, don't he? But it sure is good to hear the varmint's voice!"

"It's great," Hank agreed, "but we still have to find out where the sound is issuing from. All we know so far is the direction."

Hank penciled a bearing line on a chart. Then he and Chow moved the sound equipment to another spot and took a second bearing, thus locating the sound by triangulation.

"Must be comin' from that cliff over yonder," Chow said, beaming a portable lantern toward it.

The glow of light revealed a dark opening in the cliff. "That looks like a cave!" Hank exclaimed. As they hiked closer, Bud's voice gradually became audible.

Inside the opening, the ground fell away steeply into a wide and seemingly bottomless pit. Bud's voice came drifting upward, now singing a popular tune.

"Kin I shout down to 'em?" Chow asked.

"Save your breath, pardner," Hank said with a grin. "I'll soon rig an easier way."

He brought the sound equipment, substituted a conventional microphone for the long-range pickup, and lowered the speaker into the hole. "Can you hear us down there?" he boomed.

"We hear you, pal, and you never sounded more welcome," Tom called back.

Hank told the boys he would move the *Sky Queen* to the spot and lower a plumb line into the fissure.

"Tie a lunch basket onto it!" Bud joked.

The plumb line went down smoothly, meeting no obstructions. "The chimney may be a lot narrower at some points, though," Hank said. "We might have to drill for clearance."

In two hours a cargo jet arrived from Shopton. The Terrasphere was unloaded first. Tom had used this remarkable invention to explore the caves of nuclear fire in Africa. It consisted of a tractor vehicle mounting a powerful crane hoist, from which a spherical steel cabin was suspended on cables.

The cave opening proved to be too small to admit the tractor, but the crane boom could easily reach in over the yawning pit. Rocket anchors were driven into the ground to keep the tractor from overturning. Then Hank gave orders to his crewmen and prepared to climb into the cabin.

"Listen, *amigo*, I'm goin' along with you," Chow said firmly. "You an' them young'uns may need help gettin' out."

Hank grinned. "Okay, pardner. Hop in!"

As soon as the cabin door was closed, the huge, windowed Terrasphere began to descend into the fissure. Duplicate controls inside the cabin enabled Hank to adjust the rate at which the cables were lowered, while he talked over a phone line with the tractor crew.

The descent was bumpy and at times the opening was impassable. But the powerful

blasting action of the Terrasphere's hypersonic drill continued to clear away the obstructing rock.

Below, Tom and Bud waited anxiously to be rescued, gazing up at the narrow vertical escape route. An hour and a half later Hank and Chow reached the underground cavern. Tom and Bud greeted them with bear hugs.

"We have an earth blaster topside," Hank said. "It won't take long to drill down and bring up the Geotron. Of course she'll get pretty contaminated with radioactivity."

"Better not," Tom decided. "I think you and I can repair the repelatrions right here, if we bring down replacement parts. Come on-I'll show you what has to be done."

"Brand my biscuits," Chow said to Bud, "I still don't see how you two managed to send them SOS signals right up through the ground!"

Bud explained. "Tom did some sound tests to find out the natural resonance frequency of this cavern. Then he tuned our amplifier to the same frequency, and made the cavern walls vibrate enough to send shock waves clear up to the surface."

"Wai, I'll be a knock-kneed bronc! That bucka-roo could figger a way out o' anything!"

It was late the following morning before the Geotron was repaired and Tom could worm it back aboveground. Despite the accident Tom was not discouraged about his invention.

"I still think our mole-mobile turned in a great performance," he told Bud during the flight back to Shopton.

"It sure did," Bud agreed, "plowing through all that solid rock! But what if the same kind of accident happens again? Those underground caves are treacherous. We could even fall *down* into one if we broke through the roof."

"You're right. We'll need extra safeguards. For one thing, I'll have to improve the shock mountings of all equipment. And I'll add a form of sonar and radar to detect hollow spaces before we run into them."

A week later, with these improvements almost completed, Tom prepared for a test of his deepsea aquarium. The entire installation had been set up in a huge jet-engine testing chamber, with steel walls and a thick quartz-glass view window. Mr. Swift, Arv Hanson, and Bud watched as the young inventor spun a valve to flood the aquarium system with water.

"How much pressure do you plan to build up in your maximum depth compartments, son?" his father asked.

"Fifteen thousand pounds per square inch," Tom replied. "That should provide an ample safety factor."

Tom's face grew tense as he watched the needle of the hydraulic pressure gauge creep upward.

"Well, she's past twelve thousand," Arv remarked minutes later, "so we know the aquarium will be safe at our regular operating pres-"

Suddenly the whole experimental station shook with a tremendous explosion 1

CHAPTER XVI

AN ALARMING MESSAGE

THE disaster siren wailed a shrill alarm across the sprawling grounds of Swift Enterprises. Employees who had heard the dull boom of the explosion poured from the laboratories and workshops. Fire trucks and an ambulance raced to the source of the blast-Building 3C.

As Harlan Ames pulled up in a jeep, he spotted Hank Sterling. "Any idea what happened, Hank?"

"Not yet. Their power and communication lines shorted out," the engineer replied. "Tom was due to test his deep-sea aquarium here today. Both he and his dad are in the building!"

"Great Scott!" The structure itself appeared intact, but Ames's face went pale. He and Hank shouldered their way through a milling throng toward the entrance.

"Get these people back, Gruner!" Ames shouted to the senior plant guard.

Water was flooding from the doorway. Inside, Ames and Hank found a scene of complete confusion. The whole floor of the building seemed awash as excited employees fought to control the damage.

Torrents of water were gushing from the shattered window of the test chamber as an armored hydraulic hose snaked back and forth under tremendous pressure. Tom, Mr. Swift, Arv, and Bud were struggling frantically against the terrific outpour to reach the shut-off valve.

At last Tom managed to turn the valve partway-enough to stem the flood. A few more twists stopped the flow completely.

"Was anyone hurt?" Mr. Swift asked, turning anxiously to a foreman.

"No, sir, but you folks sure got drenched!"

Tom was looking both disgusted and downcast. "It's my fault," he said. "Some part of my aquarium design evidently wasn't strong enough."

"Exactly what happened?" Ames queried.

Tom explained that the aquarium had blown up under the tremendous pressure. The blast had been powerful enough to loosen and crack the quartz pane of the test chamber. The armored hose, blown loose from its connection, had then swung like a battering ram and broken the window so tons of water poured out.

While Mr. Swift went off to change into dry clothes, Arv and the boys stayed to assist in the cleanup job. The department was finally restored to normal working order.

Late in the afternoon Tom joined his father in their office. "Well, son, have you found out yet what caused the failure?"

Tom nodded glumly. "It was a flawed casting. Somehow it got by gamma-ray inspection. Arv took all the blame, but actually it was the fault of one technician. The guy offered to quit, but I think the bawling out Hank gave him will make him a lot more careful from now on."

Mr. Swift frowned. "Inspection is always one of the most important phases of our work. Hank and I have tried to make it a watchword around here."

The elder inventor's steel-blue eyes softened as he added, "You're not going to let this mishap stop your aquarium project, I hope."

"No indeed, Dad. But from here on I'm insisting on triple inspection of all parts. If the aquarium's going to be open to the public, we can't permit even a faint possibility of an accident."

Tom unrolled a blueprint he was carrying. "As an extra precaution, I'll beef up the design at all these points I've marked. And I'm adding a special safety valve to cut off all the pumps in case of any structural failure. This will release the pressure harmlessly."

Mr. Swift studied the drawing. "Excellent! You've certainly covered every possible

danger."

Long after the day shift had left the plant, Tom was still busy checking out the aquarium's filter system when Harlan Ames walked into the laboratory. His face was troubled.

"Anything wrong, Harlan?" Tom asked.

"I'm not sure. We ran an extra security check on Franzik-the inspector who let the faulty casting get by."

"Well?"

"Both he and his parents are native-born, but they have relatives living in Kranjovia."

"Kranjovia!" The young inventor whistled.

"Do you think their agents might have put pressure on him to-well, let's say 'arrange' an accident here at Enterprises?"

"Could be," Ames said with a shrug. "They might have threatened harm to his relatives if he didn't cooperate. Remember, that accident this morning could have put you out of the running on the aquarium project."

"Have you grilled Franzik?"

"Yes. And he voluntarily offered to take a lie-detector test to clear himself. The result cleared him, but then polygraph tests are difficult to analyze."

Tom rubbed his jaw thoughtfully. "Franzik impressed me as a decent guy. A bit careless maybe, but not a saboteur or a traitor. He sure didn't try to dodge the blame."

"I think he's telling the truth," Ames agreed. "I just don't want to take any chances, that's all. Personally, I'm in favor of letting him stay on and keeping a close watch on him."

"Okay with me, Harlan. By the way," Tom added, "any clues yet to that foreign stranger Bud suspected of tampering with the kite cable?"

"None. We're up against a blank wall. But Wes Norris phoned me yesterday that the FBI has a clue indicating Errol Clay slipped out of the country under a false passport."

Tom's eyes glinted with interest. "Any idea where he was heading?"

"He flew to Switzerland, but Norris believes he may end up in Kranjovia."

On the following Monday both the rebuilt aquarium and the tanks for the deep-sea specimens passed full-pressure tests. The next day Tom and Bud tried out the improved Geotron, burrowing under the Hudson River and the rugged Palisades along the New Jersey shore.

The boys flew back to Shopton, jubilant over the way the mole had performed. As their Whirling Duck was wheeled into a hangar, Bud asked, "How soon can we try for the space cache, Tom?"

"Later this week, I hope. We'll go after the aquarium fish at the same time. But first I'd like to rehearse the operation with the tank, somewhere off Fearing Island."

The two boys sped to the Main Building on jet scooters. Miss Trent greeted them excitedly with a message from Mr. Swift.

"He wanted you to come to the space communications lab as soon as you landed, Tom!" she said. "I just finished phoning the control tower, but they said you were already on your way here."

"Another space message?" Tom asked.

"Yes, and it must be important," the secretary replied. "Your dad had me call Harlan Ames."

"Come on, Bud! Let's get over there pronto!"

Moments later, they were striding into the space communications laboratory with its banks of electronic gear and telemetering equipment. Mr. Swift and Ames were at the decoder.

"What's up, Dad?" Tom asked eagerly. "News from our space friends?"

"No, the message isn't from them, son, and it wasn't aimed at us. But our receiver picked it up on the same frequency." Mr. Swift's face was grave as he held out the tape.

Mystified, Tom read the message. It said:

SPACE LEGION TO EARTH GROUP. WE WILL FULFILL BARGAIN IF YOU CAN OBTAIN SPACE COLONISTS* DATA BEFORE SWIFTS DO. WE

URGE YOU TO MOVE FAST.

"Jumpin' jets!" Bud exploded after scanning the tape. "Who do they mean by 'Earth Group'?"

Tom said angrily, "That's not hard to guess.

Ten to one Enrol Clay has peddled our coder secrets to some foreign power. They've probably contacted our space friends' enemies and offered to get the cache for them."

"I'm afraid you're right," Mr. Swift agreed. "If you recall, Clay was on hand when the first message about the space cache arrived."

"I know, Dad. And he saw me pinpoint the location on the map."

Tom paced back and forth. At last he said, "Maybe we haven't too much to worry about. It's not likely any foreign group would have suitable undersea digging equipment, anyhow."

"Don't be too sure of that," Ames said. "Clay may have latched onto other Enterprises secrets, including your earth blaster, Tom."

Everyone's face showed alarm as the security man went on grimly, "Don't forget the terms of the bargain, either. If this foreign group grabs the space cache first, they can trade it for a secret weapon more powerful than any the United States now possesses I"

CHAPTER XVII

FANTASTIC FISHES

TOM broke the tense silence that followed Ames's remark. "We know from this message that Earth Group hasn't recovered the space records yet. We'll just have to move faster. Dad, I'll take off for the Pacific tomorrow 1"

The elder inventor agreed. "But what about your aquarium project, Tom?"

"I think we can still combine the two operations. Bud and I will leave ahead of time in the *Sea Hound* and dive for specimens in the Peru-Chile Trench, off the South American coast. Meanwhile, the *Sky Queen* can take the Geotron to Easter Island and we'll meet there."

The rest of the afternoon and evening was spent in frantic preparations. It was

almost eleven p.m. before Tom and Bud were able to drop, exhausted, onto their bunks in the apartment next to Tom's laboratory.

At six o'clock the next morning the boys flew to Fearing Island, where the *Sea Hound* had been made ready for take-off. Tom supervised the maneuvering of the deep-sea tank into position for attachment to the seacopter. The enormous container, fifty feet long, was oval in cross section, with the oval curved inward slightly on one side. It was rigged to the *Sea Hound's* hull by vacuum-gripping devices.

"Good night!" a crewman said. "How do you expect the seacopter to haul that, skipper?"

"It won't add an extra ounce of weight." Tom grinned. "As a matter of fact, even when the tank's full of water, it can give us added lift and buoyancy."

"You mean it?"

"Sure." Tom explained that the tank's hull contained several built-in repelatrongs, which could provide an upward push against the sea floor, or against the terrain during flight. "I can turn them on manually from outside, or by remote control from the *Sea Hound*."

In half an hour the seacopter was on its way to the Pacific. Off the coast of South America, Tom dived toward the Peru-Chile Trench. About a mile and a half down, he locked the controls to hold the ship at a steady, hovering depth. He and Bud climbed into steel Fat Man suits.

Taking a large, fine, mesh net with them, the two boys went out through the air lock. They rigged the net, conical in shape, below the sea-copter. Then they propelled themselves, by the jets on their suits, back to the ship's hatch.

Tom took the controls again and began steering the *Sea Hound* slowly through the water. Its search beam carved a yellow path ahead through the inky darkness. At this depth, fish were much scarcer than in the higher regions, but a fair number were attracted by the light.

After an hour's trawling, Tom halted the sea-copter.

"Think we've snared enough?" Bud asked.

"Maybe. Let's find out."

Again the boys got into Fat Man suits and plunged from the hatch. Each carried a

small, portable scoop net. Tom was jubilant as he eyed their catch. The trawl was filled with shimmering sea life-luminescent scarlet shrimp with long, whiplike antennas, small gelatinous squid, glittering with jewels of color, and an assortment of nightmarish fish.

"Wow! What a collection!" Bud exclaimed.

The boys opened one end of the huge transport tank. Then Tom flicked a lever, and an inner shell of transparent plastic came sliding out. It extended aft to full length from the outer metal hull of the tank. The plastic shell was divided into compartments for separating the specimens-each with its own filler opening.

"Now for the ticklish part," Tom said.

The neck of the trawl net had been closed from the *Sea Hound* by remote control. Chow and the other crewmen lined the cabin window to watch as Tom and Bud opened the net and prepared to transfer the specimens to the tank.

Like most fishes from great depths, those they had caught were rather small in size, despite their monsterlike appearance. The largest were the brotulids, ranging up to a yard long, with big heads tapering aft to slender, pointed tails. Most grotesque were the angler fish-pear-shaped lumps varying from brown to jet black in color. Above their ferocious, horny-skinned snouts waved a long appendage like a fish line with a colored, frilly bait.

"They actually use those to attract prey, just like a human angler," Tom remarked as he netted one with his scoop.

"Boy! Now I've seen everything!" Bud said.

Tom chuckled. "Wait'll we trawl the bottom!"

Several viperfish and other stomiatoids fought fiercely against capture with their slashing needle-like teeth. They had already wreaked some havoc among the specimens in the net, so the boys transferred these to tank compartments as quickly as possible.

Bud was fascinated by the tiny hatchet fish, with their bulging eyes and gaping mouths. Their bellies and sides were lined with rows of glimmering pink and blue beads.

Just as the boys finished emptying the net, Tom spotted a swimming sea cucumber. The dark-violet creature was flattish and oval in shape with scalloped edges. Tom caught it easily in his scoop and added the prize to the haul.

"I've read of only one of these ever being found before," he told Bud. Tom moved the lever to retract the plastic liner and sealed the tank. The boys then boarded the *Sea*

Hound.

The seacopter resumed its dive, plunging downward through the bone-chilling, black waters. At last it halted above the sea floor near the edge of the trench. Again Tom trawled the net, plowing through the ooze of the ocean bottom.

When the boys came out in Fat Man suits to inspect their catch, Bud gave an excited cry over his sonarphone. "Look, Tom!"

A huge sea spider, about two feet in size, was stalking slowly along through the muck!

"Nab it!" Tom signaled back.

The trawl net held another rich collection. Its trove of fish included a number of rattails or grenadiers, with big, heavily armored heads and large eyes. Each had a feeler projecting from its chin that was used to probe the ooze for food.

"Tom, look there!" Bud cried as a black angler fish was netted. It had a lighted bait dangling from the roof of its gaping mouth. Bud quipped, "Will you come into my parlor?" said the angler to its prey!"

Tom laughed. Next, he netted a beak-nosed skate. Among the other creatures were brittle stars with waving snakelike tentacles, and a number of lacy sea fans in pastel pinks and lavenders.

After the catch had been transferred to the tank, the *Sea Hound* began its descent into the trench. Tom and the crew were gripped by an eerie feeling as they slowly settled toward the bottom of the inky abyss.

"This place is kind of creepy," said Bud.

They landed amid a waving field of sea pens- colonial animals growing in bunches from central stalks. They resembled huge quill pens and glowed with a pale-lilac light. Tom and Bud, in their Fat Man suits, gathered a number of sea pens before beginning their trawl.

Every step taken by the mechanical legs of their suits among the strange organisms set off sparkling bursts of bluish-white and violet luminescence. Nearby in the mud Tom noticed a small, shapeless deep-sea octopus, which he also placed in the tank.

Again the seacopter trawled its net through the ooze. The catch was fantastic. Tom counted three separate gulpers, varying up to six feet in length. [These ghastly-looking

fish appeared to be all mouth or jaw, attached to a whiplike tail ending in a luminous red spot.

"What's that-their stoplight?" Bud asked.

"Probably a lure for prey," Tom replied. "See how one has its tail curled around that little sea cucumber!" The latter resembled a plump tiny pig with four wavy horns growing out of its back. Tom hastened to free the cucumber before it disappeared into the gulper's enormous maw.

"Ugh! Look at that tiny little eye it has!" Bud muttered, pointing to one of the gulpers. "Not much more than a pinpoint!"

"You think its eye is small?" Tom replied. "It has almost *no* brain."

The net also contained a number of blind whalefish and a small velvety-black creature, half octopus and half squid with blood-red eyes.

"It's really a living fossil," Tom told Bud. "Its relatives died out millions of years ago."

"No wonder," Bud joked. "They probably took one look at that thing and passed out!"

Tom could not identify some of the specimens in the net. But he was disappointed to find that they had caught no ray fins. "Guess we'll have to do some more hunting."

When the specimens had been tanked, the *Sea Hound* began cruising through the trench. Half an hour later Bud gave an excited cry.

"Hold it, skipper! There are two of 'em!"

At the fringe of the seacopter's beam Tom could make out two of the curious fish poised on their wiry, tripod appendages. He veered, trying to catch them in the trawl. But the ray fins bounded off like giant crickets.

"Cagey HI critters!" Chow remarked. "How you goin' to catch 'em, boss?"

"Let's try some televised bait." Tom explained an idea which he had devised for future special catches of elusive sea creatures. The idea involved the use of his 3-D telejector-an amazing invention for projecting three-dimensional light images.

Halting the seacopter, Tom turned over the controls to Bud. Then he brought out his

telejector from a locker and set it up facing the cabin window. The device was a boxlike affair, four feet high and studded with dials and tuning knobs. A short latticework antenna protruded from the front.

Tom inserted a video tape, then turned on the machine. Instantly the realistic image of a tiny glowing fish could be seen in the water outside the *Sea Hound*. As Tom swiveled the antenna, the fish appeared to swim toward the ray fins.

Both tripod fish bounded toward the bait, jaws agape, ready to snap. But the fake prey easily eluded them. Tom gradually steered the bait back toward the *Sea Hound*.

As the hunting ray fins neared the seacopter, Tom cried, "Go, Bud!"

His friend gunned the hydro jets and the ship darted forward, scooping the specimens in its net.

"Brand my ole fishin' rod, that's the neatest bit of anglin' I ever seen!" Chow exclaimed.

The boys began climbing into Fat Man suits to go out and transfer Tom's prizes to the tank.

"Hey, boss!" Chow said suddenly. "Get a load o' this varmint!"

Tom dashed back to the window. A weird fish, about four feet long, was cruising past their search beam. It had a long, pointed snout, a narrow, tapering tail, and a vicious-looking horn sticking up in front of its dorsal fin.

"It's a chimaera, or ghost shark!" Tom hastily aimed the lure toward the strange fish.

"He's taking your televised bait, Tom!" exclaimed Bud. In a few moments the creature was captured.

Evening had fallen over the ocean when the *Sea Hound* finally surfaced. The craft soared aloft and streaked toward Easter Island. It landed on an open hillside fronting La Perouse Bay where the *Sky Queen* was waiting for them. Here the *Sea Hound* unshipped its tank of deep-sea specimens. The crew were astounded at the boys' catch.

Early the next morning Tom and Bud were asked if they intended to bring up any more specimens.

"Not now," said Tom. "We're going down in the Geotron to hunt for that space cache."

They climbed aboard the mole, which rumbled slowly down the beach into the water. Rounding Poike Peninsula, it headed southward.

When Tom reached the fix position, he descended to the bottom and prepared to burrow into the ocean floor. Suddenly Mr. Swift's voice crackled faintly over the underwater radio:

"Enterprises to Tom! Come in, please!"

"We read you, Dad," Tom replied. "What's up?"

"I'm afraid I have bad news, son. We've just picked up this message from our space friends:

" 'Urgent to Swifts. Enemy has seized the records of the ancient earth colonists!'"

CHAPTER XVIII

IN THE CAVERN OF TIME

TOM was overwhelmed by the bitter news that the space cache had been looted.

"What a break!" Bud groaned.

"Wait a second, Dad!" Tom exclaimed suddenly. "This could be a trick by the Earth Group or the Space Legion to make us give up the expedition! Did you call our space friends back?"

"Yes, and they confirmed the message," Mr. Swift said. "They started to add something more, but I lost contact."

"Was the signal being jammed?" Tom asked.

"It's possible. Why?"

"The whole thing could still be a trick," Tom reasoned. "Our enemy could have sent a fake message, then responded to your query fast before our space friends could activate their transmitter. When our space friends did start to transmit, the enemy began jamming."

"Hmm. That would explain what happened," Mr. Swift agreed. "Where are you now, son?"

"On the sea floor, over the fix position."

"Is there any evidence indicating that the Earth Group has been at work there?"

"None, Dad. And that makes me more sure than ever that the message is a trick. I'm going ahead with our hunt for the space cache!"

The Geotron's stern tilted upward as Tom manipulated the controls. With a hum of power, the mighty machine began nosing down into the ocean ooze. The two boys were tensely silent as the mole forced its way through the hundreds of feet of age-old sediment.

When they reached bedrock, Tom increased power. The Geotron continued at a slower rate.

"Whew! Just think of all that weight of ocean and rock pressing down on us!" Bud murmured.

Tom's face looked strained. "Maybe we'll feel better if we don't think about it."

Half an hour later, Tom's eyes blazed with excitement as he studied the sonarscope and radar-scope. "We're coming to a hollow space!"

Tom altered the Geotron's course and slowed its progress through the basalt rock. Both boys waited nervously for the breakthrough.

Suddenly the mole lurched forward and they could feel themselves plunging into emptiness. Their beam lit up a dark, rocky tunnel.

"We've hit it!" Bud gasped, then added as he peered around, "But where's the cache?"

"This tunnel may lead to it," Tom said, "if we can find out which way to go."

The Geotron lay at an angle athwart the rocky passage. Tom swiveled their light, trying to see ahead, but the tunnel appeared to curve.

"Let's try the rear compartment window," he said.

The boys made their way aft and switched on the rear search beam. Twenty yards away the tunnel dwindled and ended in a mass of rock.

"Well, it leads nowhere in that direction," Tom said, "so we may as well try the

other."

Tom returned to the forward cabin with Bud and immediately levered the crawl treads into action. The mole rumbled slowly along the tunnel. Luckily the curve of the passage was gradual enough for the machine to negotiate it without difficulty.

The tunnel widened abruptly and the glare of their search beam was reflected back from a rock wall. Suddenly Tom gave a gasp.

"Look!"

Off to the left, outside the cone of their light, something was glowing in the darkness with a weird orange radiance!

"The cache!" Bud exclaimed.

Tom swiveled the search beam, revealing that they were in a big natural cavern. Against the wall stood a large object made of some strange orange metal. It was embedded in rock and rubble.

"No water out there," said Bud. "The cavern must be full of entrapped air. Do you think it's breathable?"

"I doubt it." Tom pressed a button marked "Air-Test Intake" and watched a dial above it. "Not bad," he said, surprised. "Just a little low on oxygen."

To be on the safe side, the boys put on Fat Man suits and climbed out of the Geotron. Tom held out a radiation counter as they approached the strange object.

"It's not radioactive." Tom stared around the cavern. "You know, Bud, I'll bet this was a mountain cave once and the tunnel led into it from outside. When the lost continent sank, some of the land must have buckled and blocked the tunnel entrance deep under the sea floor. Some chemical process is going on to keep air in here."

The boys were awe-struck as they realized they were probably the only living creatures to have entered the cavern through all the eons of time since the space records had been hidden there.

As Tom and Bud worked to uncover the cache, they saw that it was larger than they had expected. Oddly geometrical in shape, the object was over six feet high and nearly ten feet long.

"Good night!" Bud said. "We can never get this thing aboard the mole!"

"Doesn't seem to have any opening, either." Tom frowned. "A cutting torch might damage whatever's inside. Bud, I think we'd better go back up and wait until Dad gets some instructions on this from our space friends."

Bud gave a nervous chuckle. "I wouldn't object to a breath of topside fresh air."

They boarded the Geotron again and began the journey back to the surface. Once above the sea floor, Tom gunned the hydrojet and sent the Geotron streaking northward through the inky waters. He blew the tanks gradually as they proceeded. By the time their cabin window bobbed up from the waves, Easter Island lay dead ahead.

The flood of sunshine through the quartz-glass pane and the sparkle of the blue Pacific filled the boys with exhilaration. Presently the Geotron rumbled up out of the water toward their campsite. Ahead on the grassy slope lay the *Sky Queen* and the *Sea Hound*. But the place seemed strangely silent.

"Where is everybody?" Bud muttered.

Tom halted the Geotron and opened the hull. They climbed out. "Hey, Chow! Hank!"

There was no answer. Only the lapping of the surf and the distant mewing of seabirds came to the boys' ears. Uneasy, they strode toward the huge plane, gradually breaking into a run.

Tom and Bud climbed aboard, then halted in dismay. The bodies of the crewmen lay sprawled about the passageway like rag dolls.

"What happened to 'em?" Bud cried out.

"Maybe the same thing that happened to the *'Angler's* crew." Tom gritted his teeth. He examined several of the men. "They're alive."

"We'd better check the *Sea Hound* too, Tom."

"Let's attend to these fellows first."

The two boys began carrying the crewmen outside, hoping that the salt air might help to revive them. They saw three horsemen galloping toward them, waving and shouting, "*Ariki!*"

"They're the natives who gave you the sacred stone!" Bud exclaimed.

The men reined to a halt and leaped from their horses. As they shook hands warmly

with the boys, they began pouring out an excited story.

"You say a ship came up out of the sea, right after Bud and I left?" Tom broke in.

"Yes," said the leader. "You are *tangata manu*, so we watch over your camp."

The trio related that men from the submarine had overpowered the crews of the *Sky Queen* and the *Sea Hound*, and had taken away the huge tank which the boys had brought to the island.

"The deep-sea specimens gone!" Bud exclaimed.

Using a midget utility tractor from the *Sky Queen's* hold, the men had hauled the tank to the beach. Then, by a cable attached to the submarine, the tank was dragged deep into the water. Divers had been seen emerging from the submarine.

Tom was heartsick. "They probably went down to secure the tank to the sub's hull," he said.

The boys set about reviving the crew. The men told them that the raiders had used strange-looking weapons to black them out.

Tom said, "The same device that was used when the *Angler* was hijacked, I'll bet!"

"We thought the sub was the *Angler* at first, Hank Sterling said. "It looked identical."

"No wonder," Tom said bitterly. "It was probably built from my blueprints."

"Those rats!" Bud stormed. "Will this ruin your chances for the aquarium project, Tom?"

"Maybe not. Lucky we have our number two tank." He turned to Hank Sterling. "Attach it right away and trawl the same area we covered before. When you've finished, leave the tank underwater. It's safer there." Tom's lips shaped a thin smile. "Maybe our enemies think the first tank was the space cache!"

Bud's eyes widened. "How come?"

"I believe they spied on us by periscope when we brought up the tank. Once they'd seized it, they radioed their base to notify the Space Legion. That would explain the later message Dad picked up."

"Then it was from our space friends!" Bud exclaimed.

Tom immediately contacted Shopton. He told his father what had happened and asked him to call their space friends for instructions on how to open the real cache. The reply was:

WE HAVE NO DATA ON WHICH TO ADVISE, USE OWN JUDGMENT.

The two boys dived again in the Geotron and burrowed to the subocean cavern. Tom used X-ray equipment to examine the cache but learned little. The contents appeared to be a curious jumble of tubing and other gear.

The boys lugged out the cutting torch and tanks from the Geotron. Finding it awkward to work in the steel eggs, they decided to take a chance on the air. They climbed out of their Fat Man suits and propped them against the cave wall. Soon a jet of flame was biting through the orange metal. A violet cloud of gas began to seep out.

Suddenly both boys reeled groggily. An instant later Bud toppled to the cavern floor! Tom, too, would have keeled over from the insidious effects of the violet vapor, but as the cutting torch slipped from his hand, the heat of its flame seared his leg. The sharp pain jolted him back to semiconscious-ness.

"We must get back to the Geotron!" Tom gasped.

CHAPTER XIX

DEADLY CLAWS

QUICKLY pulling his T-shirt over his face to keep from inhaling the insidious gas, Tom seized Bud by the arms. He dragged his friend to the mole and lugged him inside.

Once safely aboard with the hatch closed, Tom barely had time to flick on the air-system control before he collapsed to the deck alongside Bud. Several minutes passed. At last the boys stirred as the mole's purified air began to revive them.

"Hey, skipper," Bud murmured. "You okay?"

"Sure, I'm feeling better now," Tom replied. "How about you?"

"Guess I'll live. But what happened? How did I get back here to the Geotron?"

Tom chuckled dryly. "On the seat of your pants. I didn't have enough oomph left myself for a fireman's carry."

He and Bud got to their feet. Apparently they had suffered no serious ill effects.

"What are we going to do about the cache?" Bud asked.

"We'll have to use Fat Man suits."

Holding their breath, the boys emerged again and hastily got into the steel eggs. Tom resumed work with the cutting torch. Soon they were able to wrench off the top of the orange container.

Inside were a number of coils of transparent tubing which contained a greenish gas. These were mounted on a sort of chassis, surrounded by a curious assembly of apparatus-evidently electronic-but unlike any Tom had ever seen.

"What is all this spaghetti?" Bud asked over his suit radio.

"It must contain the gas-magnetic-field data that our space friends spoke of." Tom was thoughtfully silent for a moment, then went on, "I believe the magnetic field must hold the gas in a coded pattern in the tubing-somewhat like the way data is recorded on magnetic tape."

"Sounds like a good guess. Do you think the violet vapor leaked out of this apparatus?"

"No," Tom replied. "Could be it was added to the cache to dispose of any looters. Maybe the space folk themselves are impervious to it."

With some difficulty the boys managed to maneuver the apparatus into the Geotron. The mighty mole wormed its way through the solid rock walls of the cavern and headed upward.

After breaking through the ocean floor, Tom headed the Geotron toward the *Sea Hound's* trawling grounds. "I'm eager to see Hank's catch," he said.

Presently the mole's search beam picked out the long metal tank resting on the sea floor and Tom set the Geotron down near it.

Quickly the boys got into their Fat Man suits and went out to the tank. Tom flicked the lever and the plastic liner slid out of its shell.

"Wow!" Bud exclaimed. Before them was a large collection of weird sea creatures glowing and blinking in the darkness.

"Beardworms!" Tom said, pointing to five-foot-long tubes covered with wavy tentacles. "They're rare! And sea lilies!" he added, seeing several long stalks topped by

fringed "blossoms" of yellow, orange, green, and brown.

Well satisfied with the catch, Tom retracted the liner, then sealed the tank, and the boys returned to the Geotron.

As Tom reached for the controls, faint pings sounded against the hull. Hastily he switched on the sonarphone speaker. The pings came through loud and clear.

"It's a signal!" Bud exclaimed.

The boys translated as the Morse code sounds went on. There was a pause, then the signal began again, enabling them to get what they had missed at first. The entire message ran: *SOS! Help us! We are trapped on bottom!*

"Jumpin' jets!" Bud said tensely. "Who's that?"

"Don't know, but we'd better find out," Tom said. "There's only one other sub in these waters that we know of-our enemy's-unless the Chilean Navy has one operating around here."

Tom freed their Geotron from the ooze and proceeded cautiously to home in on the sound. A blip took shape on their sonarscope. Then their search beam picked out a craft lying dead ahead through the inky waters.

"It is our enemy!" Bud cried.

The submarine was almost a duplicate of the '*Angler*, except for a bulging blister amidships!

Men could be seen in the forward compartment, waving frantically.

Tom could make out a huge metal object attached to the underside of the submarine and now resting in the sediment of the sea floor. "Our deep-sea specimen tank!" he told Bud.

"What's wrong with them?" Bud asked. "Even if their sub's disabled, the tank repelatrns could boost them back up to the surface."

"They could if the men aboard have diving suits for this depth. They'd have to get out and turn them on," Tom replied. "Bud, I'll bet they don't even know about the tank repelatrns!"

A frightened voice came over the sonarphone: "Is that Tom Swift out there?"

The boys looked at each other, startled as they recognized the speaker.

"I'm here, Clay," Tom replied coldly into his microphone.

"I can imagine how you feel, Tom, but you must help us!" the traitorous engineer pleaded. "If you don't get us off the bottom, we'll die like rats in a trap!"

"A good description!" Bud muttered.

"What disabled you?" Tom asked Clay.

"When we dived, after leaving Easter, the thing we stole from you gave us too much negative buoyancy. We started going down too fast and couldn't recover our trim. Our pump design turned out to be faulty, too, so now we can't develop enough pressure to blow our ballast tanks at this depth."

"What do you expect me to do?" Tom said.

"We can't come out. We have no deep-diving suits," Clay explained. "But if you can free us from this weight underneath, I think we can plane high enough to blow our tanks."

Tom gave a chuckle, calculated to chill Clay's blood. "Why should I bother?"

"You can't let us die here!" Clay's voice sounded almost hysterical.

"Who's your captain?" Tom inquired.

"Captain Varlov-Kranjovian Navy. Here, I'll let you speak to him!"

A deeper voice cut in. "We are at your mercy, Tom Swift. You cannot violate the traditions of the sea by letting us perish!"

"Oh, no? Maybe you'd like to explain what you're doing aboard a duplicate of my latest jet-marine."

"It was copied from yours. I admit that. I myself went aboard your *Angler* and stole the engineering plans."

"Why?" Tom asked.

Varlov's voice quivered. "I acted under orders. My government needed a deep-diving submarine to acquire specimens for the deep-sea aquarium they hope to build."

"And where does Clay come in?"

"You know the answer to that," Clay spoke up. "I stole the circuit diagrams and programming instructions of your space decoder." The engineer confessed that he had made a deal with Kranjovia. He had offered to retrieve the space cache and trade it to the Space Legion for a powerful military weapon, if the Kranjovians would build a space transmitter and provide him with the necessary submarine gear.

"We'll sign any statement you want," Clay added. "But you must save us, Tom!"

"Don't trust those rats!" Bud begged.

Tom scowled for a moment in thoughtful silence. "They may be rats, Bud, but they're right. We can't leave them down here to die."

The young inventor spoke into his microphone.

"If I release you from the weight of that tank you stole, will you give me your word of honor to surface at once and surrender?"

"We give you our word!" Captain Varlov replied.

Tom turned over the controls to Bud, then got into a Fat Man suit and stalked out across the ocean floor toward the enemy jetmarine. Operating the mechanical arms of his suit, he quickly switched on power to the repelatron lifters of the deep-sea tank.

Slowly the enemy jetmarine began to rise from the sea bottom. The blister in its hull opened and a pair of powerful steel claws unfolded. The claws gripped Tom's Fat Man suit!

"Stop it!" Tom cried over his sonarphone. "You gave me your word you'd surrender!"

"Our word?" Varlov's sneering laugh sounded over Tom's headphones. "What kind of fools do you take us for? We'll never surrender! Now we have the space cache, *and you too, Tom Swift!*"

CHAPTER XX

REWARD FROM SPACE

WITH a powerful blast of its hydrojets, the enemy submarine began planing upward. Tom maneuvered desperately in his Fat Man suit but could not wrench free from the

steel claws. Unfortunately, he could not reach the controls of the tank repelatrns to turn them off again.

Varlov gave another sneering laugh. "I must tell you, my dear Swift, that those claws were designed for netting and trapping deep-sea specimens. Our engineers could hardly guess what a prize we would catch!"

Tom clenched his jaw, white with fury. It was useless to call on Bud for help. He would never be able to reach Tom in time to cut him free with a torch. The submarine was rising too fast.

"Those rats!" Tom fumed. "Bud was right-I was crazy to trust their 'word of honor'!"

Suddenly the Geotron's search beam was blacked out. The throb of the enemy jetmarine's turbines came so loudly over Tom's headphones it was difficult to judge other sounds in the water, but he guessed that the mole was getting under way. What was Bud up to?

Nothing broke the darkness of the inky waters but a faint diffused glow from the jetmarine's forward compartment. In his trapped position, Tom could not see into the sub.

"What can I do?" he wondered frantically.

From this depth, his Fat Man's radio could not hope to contact the *Sky Queen* on Easter Island. And the Geotron, like all the Swifts' expeditionary craft, was unarmed.

A sudden idea struck Tom. "There *is* a way!" he realized. "If only Bud would think of it!"

Tom dared not communicate over the sonar-phone or the Kranjovians would surely take evasive action.

Meanwhile, Bud was gunning the mole's repela-tron lifters. The craft was shooting upward like an express elevator.

Bud studied his sonarscope. Soon he was well above the level of the enemy jetmarine. He cut in the forward jet and glided through the pitch-black waters toward a small, steep-sided seamount, evidently a spur of the East Pacific Rise. Bud maneuvered the mole so as to brace its stern in a niche of the undersea cliff.

"Now to step on their heads but good!" With a determined grin, Bud angled the craft's repelatron force rays to focus directly on the Kranjovian submarine. The effect

was as if a giant hand had suddenly pushed downward on the craft. It sank like lead toward the bottom!

"Now squirm, you rats!" Bud called over the sonarphone.

The jetmarine tried to ease forward, but Bud countered fast. The repelatron force rays promptly shifted to the submarine's nose, causing it to plunge even deeper. When the enemy skipper tried to reverse, the force rays flicked to the submarine's stern, pushing that end downward.

"Nice going, pal!" Tom called gleefully. Bud's strategy was the action Tom had hoped for!

Bud quickly contacted Hank Sterling on Easter Island over the Geotron's powerful underwater radio. "Come on down in the *Sea Hound* and give me a hand, Hank!" he said. "I'll keep these Kranjovians pinned while you get Tom loose!"

"Be right with you!" Hank promised.

While the boys waited for help to arrive, Captain Varlov worked furiously to free his craft. Tom could hear sounds of frantic activity inside the jetmarine.

At last came the churning thrum of the *Sea Hound's* rotor. Tom could see the faint glow of its search beam stabbing down through the darkness. The steel claws suddenly opened, releasing his Fat Man suit!

"We surrender!" Varlov's voice screamed. "You must help us! There's a fire in the central compartment and it's out of control!"

"Tell us another!" Bud scoffed. Meanwhile, Tom began detaching the deep-sea tank from the enemy submarine before heading upward to the Geotron.

"It's true!" Clay cut in. "We gagged the safety valves on our secondary boiler trying to work up enough pressure on our hydrojet turbine to pull free! A steam line burst and shorted out some electrical wiring!"

"Tough luck, pal," Bud called back. "Better shut down your reactor, seal that compartment, and sit tight till we get the Chilean Navy."

"We cannot wait!" Varlov pleaded. "If the fire reaches our missiles, the warheads will explode!"

"Missiles, eh? Very interesting," Bud responded. "I suppose you'd have used them on

me if it weren't for our repelatron force rays."

The frantic conversation continued as Tom reached the Geotron. Once aboard and out of his Fat Man suit, he hurried forward to the controls. "I think they're on the level, Bud!" he exclaimed. "We'll have to save them!"

"Let's not get fooled twice!" Bud retorted. "We'd be risking our own necks if we tried getting those rats out one by one in Fat Man suits."

Tom weighed the odds. "We'll let them surface and abandon ship." Calling the enemy jetmarine, he asked, "Is your turbine still operative?"

"Yes, we bypassed the broken steam line before the fire got out of hand," Clay replied.

"Then get topside fast!" Tom released the jetmarine from their repelatrons.

The enemy sub planed upward, blowing its ballast tanks as it reached a high-enough depth. The mole and *Sea Hound* followed at a close but safe range. Meanwhile, the tank of deep-sea specimens rose under its own repelatron power.

Scarcely had the jetmarine's nose bobbed above the waves, when its hatch popped open. The crewmen plunged into the sea, fighting one another in their desperate haste to abandon ship. Tom and Bud threw rescue lines to them. Then, as each man was hauled aboard, the boys tied his hands. The rest of the crewmen were picked up by the *Sea Hound*,

"All accounted for, Hank?" Tom radioed. "We have four. They say there were twelve aboard."

"That checks," Hank replied. "We have eight of them-including Clay and the captain."

"Okay. Let's clear out before--"

Tom's words were blotted out by a terrific boom! The blast seemed to shake the ocean and the sky. The enemy sub had blown up! Fragments of the shattered craft were hurled aloft amid the billowing smoke, and both the seacopter and mole were heeled far over by the ensuing shock waves.

"Well, there goes Kranjovia's copy of your jetmarine!" Bud said with a satisfied chuckle.

On Tom's orders the *Sea Hound* went aloft to scout for the deep-sea specimen tank. Hank soon spotted it, undamaged, and the Geotron took it in tow. Then they headed back to Easter Island.

The enemy crew-all hand-picked Kranjovian technicians-were turned over to the Chilean authorities. A charge of having pirated the specimen tank by force from the Americans camped on the island was placed against them. As Tom had suspected, Varlov and Clay had thought the tank contained the space cache. Bud recognized one crewman, named Grinsky, who admitted that he had sabotaged the water kite to keep Tom from carrying out the aquarium project.

Grinsky also confessed that he had sent up the warning flare and acted as a spy at Fernwood to find out the sailing plans of the *Angler*. Varlov and his entire crew had participated in its hijacking.

At last the *Sky Queen*, with the mole aboard and accompanied by the *Sea Hound*, flew back to the United States. Errol Clay was taken along and turned over to the FBI to face trial for espionage.

There was great fanfare and celebration on the day the Marmor Deep-Sea Aquarium was officially opened to the public at a site adjoining the Marmor Marine Laboratory. The Swifts, Phyl, and Bud watched proudly as Cyrus Springthorpe handed Tom Jr. the award check and made a speech praising the young inventor's efforts in acquiring the deep-sea specimens for all Americans to enjoy. A vast crowd was on hand, eager to view the fantastic life from the ocean depths.

"Oh, Tom! This is even more thrilling than I thought!" Phyl cried as the Swifts' group filed through the interior glass cylinder of the aquarium. In the eerie dark-blue lighting, weird sea life could be seen all about them, many glowing with their own luminescence.

"I just hope these spooky creatures don't give us nightmares!" Sandy added with a giggle.

Meanwhile, the contents of the subocean cache had been fired into outer space aboard a rocket capsule, following instructions from the Swifts' space friends. Their message also reported that the Space Legion had been brought under control.

Tom waited eagerly for the reward promised by the Swifts' space friends. It arrived in a capsule which landed in the ocean just off Fearing Island. A launch quickly retrieved the capsule and brought it ashore, where the prize was trucked to Tom's island laboratory.

Mr. and Mrs. Swift, Bud, and the girls watched as Tom unsealed the capsule. Inside was a transparent plastic pouch full of water. It contained the strangest marine creature any of them had ever seen!

The odd fish had a scaly, armored skin, winglike fins, and a muskrat tail. A single, bulging eye on top of its head and a hoggish snout gave it a fierce appearance. But when transferred to a tank, it behaved as affectionately as a dolphin.

"This tops everything-even those queer-looking things in your deep-sea aquarium!" Sandy declared.

"Dad, just think what we can learn from this!" Tom said jubilantly. "Our first living specimen from the animal kingdom of outer space!" The young scientist's restless energy was soon to be turned skyward in a spine-tingling space adventure, *The Mystery Comet*.

Bud chuckled and threw an arm around Tom. "Sandy's right, pal," he said. "No aquarium will ever be able to top this-it's a fish *from out of this world!*"

THE END